

1972-1973
CATALOG

The Graduate



School

Bulletin of Bridgewater State College

1972-73 CALENDAR OF THE GRADUATE SCHOOL

FALL TERM 1972

1 September, Friday	Last date for receiving completed applications for October admission
5 September, Tuesday	Registration — Day Session
6, 7, 8 September, Wednesday-Friday	Registration — Continuing Education
7 September, Thursday	Classes begin — Day Session
11 September, Monday	Classes begin — Continuing Education
21 September, Thursday	Late date for changes in registration — Continuing Education
29 September, Friday	Last date for filing the November Comprehensive Examinations
6 October, Friday	Last date for changes in registration — Day Session
9 October, Monday	Columbus Day — no classes
23 October, Monday	Veteran's Day — no classes
28 October, Saturday	Graduate Record Examinations (Lecture Hall, Conant Science Building)
1-30 November	Comprehensive Examinations
7, 8 November, Tuesday-Wednesday	Orientation meetings for applicants for degree programs in elementary education, elementary school mathematics, guidance, reading, school administration, special education, and special education-learning disabilities (4:00 P.M., Demonstration Rm. Boyden Hall)
22-24 November, 8 December, Friday	Thanksgiving Recess — all classes suspended at noon
9 December, Saturday	Last date for receiving completed applications for January admission
15 December, Friday	Graduate Record Examinations (Lecture Hall, Conant Science Building)
	Last date for filing Petition for Acceptance of Transfer Credit for students who anticipate the completion of degree work in June
21 December, Thursday	Last day of Fall Term in Continuing Education
22 December, Friday	Last day of Fall Term in Day Session
22 December-12 January, 1973	Christmas and Intersemester Recess — Continuing Education
25 December-11 January, 1973	Christmas and Intersemester Recess — Day Session

SPRING TERM 1973

5 January, Friday	Last date for filing Application for Degree for students who expect to receive the diploma in February
12 January, Friday	Registration — Day Session
10, 11, 12 January, Wednesday-Friday	Registration — Continuing Education
15 January, Monday	Classes begin — Day Session and Continuing Education
26 January, Friday	Last date for changes in registration — Continuing Education
15 February, Thursday	Last date for changes in registration — Day Session
19 February, Monday	Washington's Birthday — no classes
1 March, Thursday	Last date for filing for the April Comprehensive Examinations
30 March, Friday	Last date for receiving completed applications for May admission
1-30 April	Comprehensive Examinations
6 April, Friday	Last date for filing Application for Degree for June Commencement
16 April, Monday	Patriots' Day — no classes
20 April, Friday	Good Friday — no classes
24, 25 April, Tuesday-Wednesday	Orientation meetings for applicants for degree programs in elementary education, elementary school mathematics, guidance, reading, school administration, special education, and special education-learning disabilities (4:00 P.M., Demonstration Rm. Boyden Hall)
28 April, Saturday	Graduate Record Examinations (Lecture Hall, Conant Science Building)
17 May, Thursday	Last day of Spring Term in Continuing Education
25 May, Friday	Last day of Spring Term in Day Session
25 May, Friday	Last date for filing for the July Comprehensive Examinations
27 May, Sunday	Commencement
1 June, Friday	Last date for filing Petition for Acceptance of Transfer Credit for students who anticipate the completion of degree work in August
16 June, Saturday	Graduate Record Examination (Lecture Hall, Conant Science Building)

SUMMER TERM 1973

1-30 July	Comprehensive Examinations
5, 6 July, Thursday-Friday	Registration
9 July, Monday	Classes begin
11 July, Wednesday	Last date for changes in registration
20 July, Friday	Last date for filing Application for Degree for students who expect to receive the diploma in August
17 August, Friday	Last day of Summer Term
17 August, Friday	Last date for filing Petition for Acceptance of Transfer Credit for students who anticipate the completion of degree work in February

Series 3, Volume 10, Number 2



**BULLETIN OF
BRIDGEWATER STATE COLLEGE**

FOUNDED IN 1840

**GRADUATE SCHOOL
1972-1973**

**The Commonwealth of Massachusetts
DIVISION OF STATE COLLEGES**

This Bulletin is a guide for information and not a contract. The College reserves the right to change requirements for degrees, prerequisites, fees, scheduling, and related matters. All such changes are implemented in such a way that any new curricular requirements will work no hardship on a student who has entered under an earlier set of requirements.

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²Appointment effective September 1972. Replaced Dean Lee Francis Harrington who became President of Massachusetts Maritime Academy on January 2, 1972.

³Replaced Joseph Graessle Moore on February 7, 1972.

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Dean Wallace Ludwig Anderson, Ph.D.⁵

⁴Replaced Joseph Graessle Moore on February 7, 1972.

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GUTALA KRISHNAMURTI,* B.A., M.A. (Andhra University, India), Ph.D. (Sourgar University, India), Assistant Professor of English.

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ROBERT N. LARSON, A.B. (Columbia University), A.M. (Tufts University), A.M., Ph.D. (Boston University), Professor of Political Science and Chairman of the Department of Political Science.

OLIVE LEE, A.B. (Radcliffe College), B.S. (University of North Carolina), Instructor in Library Science.

THOMAS LEE, B.S. (Bridgewater State College), M.S. (Syracuse University), Assistant Professor of Instructional Media.

* Gutala Krishnamurti resigned January 29, 1972.

- HARRY AUGUST LEHMANN, B.S., M.Ed. (Springfield College), Associate Professor of Physical Education for Men and Chairman of the Department of Health and Physical Education for Men.
- ROBERT ELWOOD LEMOS, B.S. (Bridgewater State College), M.Ed. (Harvard University), Associate Professor of Mathematics, and Associate Director of the Division of Continuing Studies.
- JAMES TRELEAR LESTER, B.S. (Northwestern University), M.S., Ph.D. (University of California), Professor of Psychology and Chairman of the Department of Psychology.
- STEPHEN MARK LEVINE, B.A. (Moravian College), M.A. (University of Denver), Assistant Professor of Speech and Theatre.
- JACOB LIBERLES, B.S. (Lowell State College), M.A. (Beinnington College), Assistant Professor of Music.
- JOHN W. LUCAS, B.A. (Bowling Green State University), M.A. (Boston University), M.A. (Middlebury College), Instructor in Modern Foreign Languages.
- CHESTER G. LUPTON, B.A. (Harpur College), M.A. (Brown University), Instructor in Psychology.
- DENNIS LEO LYTHGOE, B.A., M.A., Ph.D. (University of Utah), Assistant Professor of History.
- ROBERT DOUGLAS MAC CURDY, B.S. (University of Massachusetts), M.S. (Michigan State University), Ed.D. (Boston University), Professor of Education.
- AGRIPPINA ANNE MACEWICZ, B.S. (Worcester State College), M.A., Ph.D. (Clark University), Professor of Geography.
- EMANUEL MAIER, B.A., M.E.S. (City College of New York), Ph.D. (New York University), Ph.D. (Clark University), Professor of Geography and Chairman of the Department of Earth Sciences and Geography.
- HENRY MYRON MAILLOUX, B.S. (Fordham University), M.A. (Columbia University), Associate Professor of Mathematics.
- MICHAEL MAKOKIAN, A.B. (Rhode Island College), M.A. (Rutgers University), Associate Professor of Mathematics.
- VAHE MARDIROS MARGANIAN, B.S. (San Francisco State College), M.S., Ph.D. (Clemson University), Associate Professor of Chemistry.
- PETER MAZZAFERRO, B.A. (Centre College), M.Ed. (Springfield College), Assistant Professor of Physical Education for Men.
- CHARLES F. MC GINNIS, A.B. (Tufts University), M.A. (Boston College), Ph.D. (Columbia University), Associate Professor of English.
- OWEN THOMAS MC GOWAN, A.B. (Maryknoll College), M.S. in L.S. (The Catholic University of America), (ranking) Librarian.
- LEO J. MC GUIRK, B.A. (University of Massachusetts), M.Ed. (Bridgewater State College), Assistant Professor of Education.
- FREDERICK A. MEIER, B.S., M.S. (Boston College), D.H.S. (Indiana University), Professor of Education.

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- JOSEPH GRAESSLE MOORE,* B.A. (Hamline University), B.D. (Seabury-Western College), M.A., Ph.D. (Northwestern University), Professor of Anthropology, and Director of the Division of Behavioral Sciences.
- THOMAS EUGENE MOORE, A.B. (Stonehill College), M.S. (University of Notre Dame), Instructor in Mathematics.
- WALTER ARTHUR MORIN, A.B. (Merrimack College), M.S. (Boston College), Ph.D. (Clark University), Associate Professor of Zoology.
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- ADELIN DUPOUY OAKLEY, B.S. (Bridgewater State College), M.L.S. (Simmons College), Assistant Professor of Library Science.
- LUCILLE O'CONNELL, B.A. (Brooklyn College), Assistant Professor of History.
- ARTHUR CARLISLE OIEN, B.A. (Concordia College), M.A. (University of Minnesota), Associate Professor of History.
- LENORA MARIE PADULA, B.A. (Emmanuel College), M.A. (Boston College), M.A. (Middlebury College), Assistant Professor of Modern Foreign Languages.
- JOSEPH MICHAEL PAGANO, B.S. (Massachusetts Institute of Technology), M.S. (Boston College), Assistant Professor of Chemistry.
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* Joseph Gaessle Moore retired February 7, 1972.

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- HENRY ROSEN, A.B. (Dartmouth College), A.M., Ed.D. (Boston University), Professor of Instructional Media, Chairman of the Department of Instructional Media, and Director of Media Services.
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- IGNATIUS PHILIP SCALISI, B.S., M.S. (Northeastern University), Assistant Professor of Mathematics.
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- DORIS EMMA TEBBETTS, B.S. (Massachusetts College of Art), M.A. (University of Minnesota), Associate Professor of Art.
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CHARLES THOMAS WOLPERT, B.S. (Mount Union College), Ed.M. (University of New Hampshire), Instructor of Education.

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RICHARD YIN, B.A. (Chengchi University, Taiwan), M.A. (Brigham Young University), Assistant Professor of Political Science.

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JOHN RAYMOND ZU WALLACK, B.A. (University of Connecticut), M.S. (Southern Connecticut State College), Assistant Professor of Education.

BURNELL SCHOOL FACULTY

DORIS MARGARET SPRAGUE, B.S., M.Ed. (Bridgewater State College), Associate Professor of Education and Principal.

MARIAN CLAIRE DOYLE, B.S., M.S. (State University of New York, College at Potsdam), Assistant Professor of Education.

MARY CARROLL DOYLE, B.S., M.S. (Bridgewater State College), Assistant Professor of Education.

RUTH MARY GAMSON, B.S., M.Ed. (Bridgewater State College), Associate Professor of Education.

ELIZABETH MAYNARD HIGGINS, B.S. (Bridgewater State College), M.Ed. (Boston University), Instructor in Education.

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PRISCILLA LUCAS CHAPMAN, B.S. (Bridgewater State College), Laboratory Instructor in Education.

DIANNE VAN PUTTEN SMITH, B.S. (Bridgewater State College), Burnell School Librarian.

VISITING LECTURERS 1971-1972

- BARBARA PHILLIPA AALTO, A.A. (Bates College), M.A. (Boston University), Ph.D. (University of Minnesota), Visiting Lecturer in Education.
- FREDERICK ADAMS, B.S. (Southern Connecticut State College), M.A. (University of Connecticut), Visiting Lecturer in Education.
- LEO BERGERON, A.B. (Merrimack College), M.Ed. (Boston College), C.A.G.S. (Boston University), Visiting Lecturer in Education.
- CHRISTOPHER BORDEN, B.S. (Rhode Island College), Ed.D. (Boston University), Visiting Lecturer in Education.
- JANET BROADBENT, B.S. (North Adams State College), M.Ed. (Boston University), Visiting Lecturer in Education.
- JOSEPH CHASE, Ph.B. (Brown University), Visiting Lecturer in Earth Science.
- LIANA CHENEY, B.A., M.A. (University of Miami), Visiting Lecturer in Art.
- MARGARET CURRAN, M.Ed. (Smith College), C.A.G.S. (Boston University), Visiting Lecturer in Speech and Theatre.
- JUDITH ANN DECKERS, B.S. (Worcester State College), M.Ed. (Boston University), Visiting Lecturer in Education.
- JUDITH DEVINE, B.S. (Boston State College), M.Ed. (Columbia University), Visiting Lecturer in Education.
- JOHN TIMOTHY DONOGHUE, B.S., M.S. (University of Massachusetts), Ph.D. (University of Illinois), Visiting Lecturer in Chemistry.
- JAMES MARTIN DONOVAN, B.A., M.A. (Boston College), Visiting Lecturer in Library Science.
- WILLIAM DUNSTON, B.S. (Yale University), M.S., Ph.D. (Florida State University), Visiting Lecturer in Earth Science.
- JUDITH IRENE ELMS, B.S., A.G.S. (Gordon College), Visiting Lecturer in Education.
- MARTHA CATHERINE ENGLER, Visiting Lecturer in Library Science.
- NAOMI FARRELL, B.S. (Wheelock College), M.S. (Syracuse University), Visiting Lecturer in Education.
- PAUL FINNEGAN, B.S. (Boston College), M.Ed. (Bridgewater State College), Visiting Lecturer in Education.
- HARRISON SEARS FISK, B.A., M.S. (Boston University), Visiting Lecturer in Library Science.
- ROBERT PAYNE FOX, A.B. (Harvard University), M.S. (Trinity College), Visiting Lecturer in Education.
- PAUL LAWRENCE GAINES, B.S. (Xavier University), M.Ed. (Bridgewater State College), Visiting Lecturer in Education.
- CHARLES WILLIAM GAUGHAN, A.B. (Harvard University), M.Ed. (Boston University), M.S.S.W. (Tufts University), Visiting Lecturer in Sociology.
- ROBERTA RUTH GIANFORTONI, B.A. (State University of New York at Binghamton), M.A. (University of Wisconsin), Visiting Lecturer in Anthropology.

- DAVID STANLEY GOODENOUGH, B.S. (University of Connecticut), M.S., Ph.D. (Purdue University), Visiting Lecturer in Education.
- RICHARD EVARISTE GRAY, B.S. (Salem State College), M.Ed. (Fitchburg State College), Visiting Lecturer in Education.
- JOANNE HADALSKI, B.S. (Bridgewater State College), M.Ed. (Boston College), Visiting Lecturer in Education.
- WILLISTON HOLBERT, A.B. (Gordon College), M.Ed. (Bridgewater State College), Visiting Lecturer in Education.
- RANDY FRANCES KANDEL, B.A. (University of Wisconsin), M.A. (City University of New York), Visiting Lecturer in Anthropology.
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- DANIEL PETER KULICK, A.B. (Stonehill College), M.Ed. (Boston College), Visiting Lecturer in Education.
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- MARYLOU MC CRILLIS, A.B. (William Smith College), M.Ed. (Boston University), Visiting Lecturer in Education.
- WILLIAM MC GRATH, A.B. (Boston College), M.Ed. (Boston State College), Visiting Lecturer in Education.
- BERNARD JAMES MC KEARNEY, B.S., M.A. (University of Wisconsin), Ph.D. (University of Connecticut), Visiting Lecturer in Education.
- CHESTER JOSEPH MILLETT, JR., B.S. (College of the Holy Cross), M.Ed. (Boston University), C.A.G.S. (Boston College), Visiting Lecturer in Education.
- CHARLES GORBY MITCHELL, A.B. (Butler University), M.A. (University of Michigan), Visiting Lecturer in Psychology.
- GORDON MITCHELL, B.S., M.Ed. (Bridgewater State College), Visiting Lecturer in Education.
- MARY JOSEPHINE MORIARTY, A.B. (Villa Maria College), B.S., Ed.M., Ed.D. (Boston University), Visiting Lecturer in Health Education.
- MICHAEL MORIARTY, B.S. (Worcester State College), M.Ed. (Boston University), Visiting Lecturer in Education.
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- NANCY NEWBERT, A.B. (Wheaton College), M.A. (Columbia University), Visiting Lecturer in Psychology.
- ARTHUR NEWMAN, B.S. (Iona College), M.Ed. (Boston University), Visiting Lecturer in Education.
- JOSEPH MICHAEL O'NEIL, B.S., M.Ed. (Boston State College), Visiting Lecturer in Education.
- ARTHUR LEO PENARDI, B.S., M.Ed. (Boston University), Visiting Lecturer in Education.
- ALBERT JOSEPH PETTIPAS, B.A. (Bridgewater State College), M.Ed. (Northeastern University), Visiting Lecturer in Education.
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- RICHMOND POOLE, B.S. (Syracuse University), M.F. (Yale University), Visiting Lecturer in Education.
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JEFFREY EDWARD TWAROG, B.A. (Southeastern Massachusetts University), M.A. (Assumption College), Visiting Lecturer in Education.

FRANK VENTURA, B.S., M.Ed. (Bridgewater State College), Visiting Lecturer in Education.

DOROTHY STEFANY VILLOCH, B.A. (University of Michigan), M.A. (Washington University), Visiting Lecturer in Education.

GENERAL INFORMATION

Bridgewater State College shares the national tradition of providing high quality education supported in large part by the State. Serving qualified students throughout the Commonwealth and particularly those living in the southeastern area, the College is committed to encouraging the broad educational preparation which is essential for making a maximum contribution to profession, community, and nation, and for developing a sound personal life. While maintaining its historical concern for preparing teachers, Bridgewater also dedicates itself to the education of students who may be interested in other vocations and professions.

Bridgewater strives to provide an atmosphere of integrity, justice, and social concern and to develop within the student a self discipline which will be evident beyond the classroom. In addition to stimulating his intellectual curiosity, Bridgewater State College also provides the student with the opportunity to understand and appreciate the major contributions to man's knowledge of himself and of the physical and social world in which he lives.

It is the stated policy of the Board of Trustees of State Colleges that in matters of college admissions, all individuals will be evaluated on their merits without respect to their race, color, creed, national origin, age, or sex, as prescribed in applicable federal and state law.

Bridgewater State College holds membership in the New England Association of Colleges and Secondary Schools and the New England Conference on Graduate Education.

The College is located in the town of Bridgewater, a pleasant residential community located three miles from an expressway leading to major highways to New York, Boston, and Cape Cod. Motoring time to Boston is approximately forty-five minutes; to New York, four and one-half hours; and to Cape Cod, one hour; bus service to Boston is available.

ADMINISTRATIVE ORGANIZATION OF PROGRAMS

The College conducts a day session for full-time undergraduates and a limited number of full-time graduate students, as well as afternoon and evening programs for full-time and part-time undergraduate and graduate students. The latter programs are for students who wish to take courses for self-improvement or certification, or for those who have been accepted in an undergraduate or graduate degree program.

Information relative to graduate degree programs may be obtained by writing or telephoning (697-6161 x 301) the Assistant to the Dean of the Graduate School.

DIVISION OF CONTINUING EDUCATION

The Division of Continuing Education schedules courses for undergraduate, graduate, and audit credit, as well as non-credit courses. **Information and guidance relative to graduate degree programs are not given through this Division.**

Most graduate students earn all of their credits in courses offered through the Division. Classes are conducted Monday through Thursday, afternoon and evening, during the fall and spring terms. Summer session classes are also scheduled by the Division of Continuing Education. It is essential that graduate students obtain the Division's brochure prior

to each term (fall, spring and summer). Information relative to course offerings, office hours, course registration, tuition and related matters will be found in this brochure.

Students are limited to a maximum of two courses (six-eight credits) during the summer session. Full-time teachers and other persons who are employed on a full-time basis may enroll for a maximum of two courses (six-eight credits) during the fall and spring terms. If a graduate student should earn more than the permitted maximum number of credits in a given term, or summer session, such credits will not be applied toward meeting degree requirements.

Fall and spring classes in the Division of Continuing Education are scheduled between the hours of 4:30 p.m. and 10:00 p.m., Monday through Thursday. Each course meets once per week.

Summer school classes are scheduled by the Division of Continuing Education between the hours of 8:30 a.m. and 1:30 p.m., Monday through Friday, and from 7:00 p.m. to 10:00 p.m. on Monday, Wednesday and Thursday of each week. Morning courses meet five times per week and evening courses meet three times per week.

Students who have been admitted by the Graduate School to a master's degree program at Bridgewater State College may register for courses in advance by mail. Students who wish to register in advance should obtain a registration form for each course at the Division of Continuing Education Office. Changes in scheduling will be announced at registration or as soon thereafter as possible.

Courses marked G are strictly graduate courses whereas those designated UG may be taken for either undergraduate or graduate credit. In order to enroll in a G course or to obtain graduate credit in a UG course, a student must hold a bachelor's degree from a four-year college and, at the time of registering for such a course, indicate on the registration form his intention of taking it for graduate credit. Courses marked U are strictly undergraduate courses, and may not be taken for graduate credit.

Successful completion of graduate courses does not obligate the Graduate School to accept a student in a graduate program.

ACADEMIC FACILITIES

Boyden Hall is located on the upper campus, between School and Grove Streets. It contains administrative and business offices, the Horace Mann Auditorium, classrooms, and offices for faculty members.

Burnell School is located on Grove Street, south of Boyden Hall. The school conducts classes from kindergarten through grade four. A number of students spend eight weeks observing and teaching classes at the Burnell School.

The Student Union containing student lounges, an auditorium, and cafeteria is located on Park Avenue opposite Pope Hall and the Conant Science Building.

Conant Science Building is located on Park Avenue, on the lower campus. The building contains the Departments of Biological Sciences, Chemistry, Earth Sciences and Geography, Mathematics, Physics, Instructional Media, and the Graduate Office. A computer facility is housed in room 203 of the Conant Science Building. It consists of a PDP-8/I computer and a teleprinter which serves as the input-output device. Courses are offered in computer programming and the equipment is available for use by qualified students and faculty. Those interested in working with the computer may contact Professor Abramson of the Mathematics Department or Professor Daley of the Chemistry Department.

Kelley Gymnasium is located on Park Avenue, on the lower campus. It contains two gymnasiums, an Olympic pool and other facilities for the Departments of Physical Education for Men and Women.

Maxwell Library, which moved into a new building in the Fall of 1971, seats 2,500 students. With a present collection of 125,000 books, it has space for 300,000 more. Additionally, it has a collection of 5,000 pamphlets and subscribes to 900 periodicals and 16 foreign and domestic daily newspapers. Available in the new building are copiers, microfilm and microfiche readers of all types. There are listening booths, a listening lounge and a specially equipped listening classroom. In addition to standard carrels, there are over 50 carrels with electronic dial access equipment. In the microfilm and microfiche holdings are included a complete file of **The New York Times**, the 20,000-volume **Library of American Civilization**, and the Educational Resources Information Center Collection of over a million articles on education.

Stevens Greenhouse and Boyden Botanical Gardens are located on Park Avenue, on the lower campus between Pope Hall and the Conant Science Building. These facilities, which are managed by a horticulturist, are used by the Department of Biological Sciences for instruction and research.

STUDENT HOUSING

Undergraduate students are housed in the following residence halls: Great Hill, Durgin, Pope, Scott, Tillinghast, and Woodward.

At present, on-campus housing is not available for graduate students, but there are a number of approved off-campus houses for students who wish to pursue a full-time graduate program. Students interested in off-campus housing should write to the Dean of Students.

RESIDENCE ASSISTANTSHIPS

A limited number of residence assistantships are available. These positions offer qualified graduate students, both male and female, an opportunity to gain experience in human relations, counseling, and administration. Appointments are for the academic year, September-June. Remuneration is in the form of room, board, and tuition. For further information, including qualifications and duties, write to:

Graduate Assistant Program
Division of Student Personnel
Bridgewater State College
Bridgewater, Massachusetts 02324

SCHOLARSHIPS AND FELLOWSHIPS

There are, at present, neither scholarships nor fellowships available to graduate students.

NATIONAL DEFENSE STUDENT LOANS

Graduate students who have been accepted by the Graduate School and who are taking at least six credits of work per semester, are eligible to apply for a National Defense Student Loan. Such applications should be made through the Financial Aid Office in Boyden Hall.

Students applying for such loans must present a letter to the Financial Aid Officer from the Dean of the Graduate School, attesting to their accepted status, as well as proof of registration for the required number of hours.

Applications must be submitted prior to March 15th for the summer session and prior to July 1st for the fall and spring terms.

Graduate students (with accepted status) may borrow up to a maximum of two thousand, five-hundred dollars (\$2,500.00) per year; the total amount borrowed for all degree programs, both undergraduate and graduate, may not exceed ten thousand dollars (\$10,000.00). Individual determination of a loan award is based on a student's proven need as demonstrated in the standard **Parent's Confidential Statement**, and by the amount of funds available in the Financial Aid Office. The repayment period and interest begin nine months after a student has completed his program. Total payment may be extended ten years and nine months after a student has completed his degree program. Interest is at the rate of three percent per year on the unpaid balance. Repayment may be deferred up to three or four years if the borrower is serving in the Armed Forces, the Peace Corps, or Vista.

As much as one-half of the loan may be forgiven if the borrower becomes a full-time teacher at any level. The amount of forgiveness is ten percent of the amount borrowed for each year of teaching, up to a maximum of five years. If the borrower teaches in eligible schools in low-income areas, the rate of forgiveness may be fifteen percent per year.

COUNSELING

Students may have problems and needs that require special forms of help or guidance. Among these are questions and concerns about their educational programs and academic achievement, housing, finances, health, social adjustment, part-time work, and placement.

To assist students in making adjustments, intelligent plans, and wise decisions, the College has provided professional staff services in the major areas of student needs.

The faculty-student relationship is the center of college counseling, for faculty are best qualified to guide the student in his academic and professional growth. Each graduate student works closely with a faculty adviser from whom he receives help and guidance in the pursuit of his graduate program. Additional guidance by a professional counselor may be arranged through the Office of the Dean of Students.

RELIGIOUS GROUPS

In the neighborhood of the campus there are available various religious groups and churches, Catholic, Protestant, and Jewish with which interested students may affiliate. A listing of these may be obtained in the Office of the Dean of Students.

HEALTH SERVICES

A hospital suite is located on the first floor of S. Elizabeth Pope Hall (telephone 697-6161 x 386). Nursing services are available to all students of the college at all times. A doctor is on duty Mondays, Wednesdays, and Fridays from 8:00 a.m. to 12:00 noon.

STUDENT BOOKSTORE

The Student Bookstore is located in the Student Union. The store has a drug and cosmetic rack, as well as supplies, souvenirs, textbooks, and leisure reading material. The Bookstore is open Monday through Thursday from 8:00 a.m. to 8:30 p.m., except on Friday, 8:00 a.m. to 4:00 p.m., as well as 9:00 a.m. to 12:00 noon on Saturday.

Books may be paid for by cash or check. All checks should be made payable to Student Bookstore, Inc., with the student's home address appearing on the check. The store does not handle used books. Books may be returned to the store only if they are defective or if courses for which they have been ordered are cancelled. Returned books must be unmarked, in saleable condition, and accompanied by Bookstore sales receipt.

CHANGE OF NAME AND/OR ADDRESS

Students should notify the Office of the Graduate School immediately, by using the appropriate form, **Change of Name and/or Address**, of any change in name or address. Failure to do this may cause unfortunate complications and delays which inconvenience students. Forms are available at the Office of the Graduate School.

MOTOR VEHICLE REGULATIONS

Students should secure a copy of **Traffic Control Regulations** which contains regulations governing the use of motor vehicles. A parking decal must be affixed to the left window of all motor vehicles on campus. The fee for a parking decal is one dollar (\$1.00). Regulations and decal are obtainable at registration or at Campus Police Headquarters after registration.

SELECTIVE SERVICE

Information regarding Selective Service regulations and deferment may be obtained from the student's Selective Service Local Board.

TEACHER CERTIFICATION

Teacher certification is the responsibility of the State Department of Education. All inquiries relative to certification should be addressed to the Director, Bureau of Teacher Certification and Placement, 182 Tremont Street, Boston, Massachusetts 02111.

PLACEMENT SERVICES

Placement services are available to graduate students seeking positions in the field of education through the Office of Teacher Preparation and Placement which is located in Woodward Hall. Position vacancies are posted on the placement bulletin boards and are filed in placement folders indexed on the basis of type of vacancy and geographical location. Interviews with prospective employers are initiated by candidates themselves.

Other job information and interviews are arranged through the Guidance Office in Boyden Hall.

OTHER COLLEGE POLICIES

Information or additional information concerning such matters as smoking, bulletin boards, vending machines, messages and library services should be obtained at the time of registration.



THE GRADUATE SCHOOL

As of January 1, 1972, 1,227 students were enrolled in graduate programs leading to a master's degree at Bridgewater State College. The Graduate School acts as a coordinating institution among the several departments engaged in graduate instruction. The Dean and the Graduate Committee, together with administrators and faculty, work toward the maintenance of uniform standards for higher degrees.

The primary aim of the Graduate School is to produce graduates who are not only competent in their major field, but are also aware of their professional responsibilities. Another major goal is to foster research on the part of both faculty and students. Every graduate student is given the opportunity to engage in original investigation under the direction of a member of the faculty.

The Office of the Graduate School, which is located in Room 211 of the Conant Science Building, is open from 8:00 a.m. to 5:00 p.m., Monday through Friday throughout the year, except for legal holidays.

Appointments with the Assistant to the Dean may be made by telephoning 697-6161, x 301. Official notification of such matters as acceptance, grades, and results of all examinations will be released by letter only.

Persons interested in working toward a master's degree on either a full-time or part-time basis should obtain a current copy of the Graduate School Catalog. This Catalog is published in August of each year and may be obtained at the Office of the Graduate School. Catalogs are bulk-mailed on a monthly basis to those who request them.

GRADUATE COMMITTEE

The Graduate Committee recommends policies relative to the Graduate School and graduate curricula. It reviews and makes decisions on applications to the Graduate School which have been considered by the academic departments.

GENERAL POLICIES AND PROCEDURES

Students are responsible for all information given in the latest edition of the Catalog and also for any notices posted on the bulletin boards of the Graduate School, the Division of Continuing Education, the Library, and the academic departments.

No deviations from any graduate regulations are permissible unless they are approved by the Graduate Committee and the Dean of the Graduate School.

DEADLINES

Students are reminded to consult the annual Calendar of the Graduate School for deadlines and dates relative to such matters as: admission, Graduate Record Examinations, examination requests, approval of transfer credit, and filing applications for degrees. This Calendar is printed on the inside front cover of this Catalog.

TIME LIMITS

All requirements for the degree must be completed within six years from the date of the student's acceptance. No graduate course offered for the degree may be more than six years old at the time degree requirements are completed.

REGISTRATION

Graduate work is offered through both the Division of Continuing Education and the Day Session. Those enrolled in a degree program, if they wish to maintain their status as a graduate student, are required to take a minimum of one course each calendar year. This is to ensure that our facilities are used efficiently and that students remain in contact with their fields and make progress in their degree programs. Graduate students who do not meet this minimum registration requirement must request permission, from the Dean, to reenter the Graduate School.

Graduate students while working toward a degree on a **part-time** basis (i.e., enrolled for less than 12 graduate and/or undergraduate credits in a given term) must take all of their courses through the Division of Continuing Education. All students who have been accepted in a degree program and who plan to enroll in a course or courses offered through Continuing Education should preregister by mail. A registration form for each course must be obtained from the Division of Continuing Education.

Graduate students while working toward a degree on a **full-time** basis (i.e., enrolled for a total of 12 or more graduate and/or undergraduate credits in a given term) may take courses through the Division of Continuing Education and/or the Day Session. Intention to enroll on a full-time basis must be reported to the Graduate School Office, at which time a form entitled **Request for Enrollment as a Full-time Graduate Student** should be obtained. This form must be submitted by the student at registration.

N.B. Only those courses listed in the Day Session Catalog may be taken in the Day Session. (For example BI 502 **Research G** and HI 503 **Directed Study G** may **not** be taken in the Day Session.)

Ordinarily, no full-time graduate student may register for more than twelve undergraduate and/or graduate credits during the fall or spring term. No graduate student, either full-time or part-time, may register for more than two courses (6-8 credits) during the summer session. Any graduate student who earns more than the permitted number of credits allowed in a given term or summer session may not apply more than the permitted maximum number of credits toward the degree.

Students who complete courses at the Hyannis Summer Session should request the Director of the Session to forward transcripts to the Office of the Graduate School.

TUITION AND FEES

Tuition for Residents of Massachusetts

1. \$100.00 per fall or spring term for full-time graduate students enrolled for a minimum of 12 graduate and/or undergraduate credits in the Day Session
2. \$18.00 per credit for full-time graduate students enrolled for less than 12 graduate and/or undergraduate credits in the Day Session
3. \$22.00 per credit for part-time and full-time graduate students enrolled for graduate and/or undergraduate credit in the Division of Continuing Education
4. \$15.00 per audit credit for part-time and full-time graduate students auditing courses in the Division of Continuing Education

Tuition for Non-residents of Massachusetts

1. \$600.00 per fall or spring term for full-time graduate students enrolled for a minimum of 12 graduate and/or undergraduate credits in the Day Session

2. \$21.00 per credit for full-time graduate students enrolled for less than 12 graduate and/or undergraduate credits in the Day Session
3. \$29.00 per credit for part-time and full-time graduate students enrolled for graduate and/or undergraduate credit in the Division of Continuing Education
4. \$11.00 per audit credit for part-time and full-time graduate students auditing courses in the Division of Continuing Education

Fees

1. \$10.00 Registration
2. \$ 5.00 Library
3. \$ 5.00 Student Union Building
4. \$10.00 Laboratory courses in Biology, Chemical Sciences, Earth Sciences, and Physics
5. \$ 5.00 Studio courses in Art and Music
6. \$ 5.00 Laboratory courses in Instructional Media and Speech and Theatre
7. \$ 5.00 per copy (\$15.00 minimum) Thesis
8. \$17.00 Commencement

Payment to Bridgewater State College for tuition and fees must be made in full by check or money order at the time of registration. Veterans should consult the Veterans' Coordinator concerning possible tuition waiver.

No degree will be conferred and no degree transcripts will be issued unless all tuition and fees have been paid in full.

Tuition and fees are subject to change at any time prior to registration.

DEPARTMENTAL PREREQUISITES

Departmental prerequisites may be required to ensure adequate preparation for graduate work in the area of concentration. Departmental prerequisites may be fulfilled after the applicant's acceptance by the Graduate School. Certain advanced courses require that students have completed certain prerequisites. Official enrollment in such courses require that a **Prerequisite Statement** form be filed with the instructor. This form may be obtained from the instructor at the first class meeting and should be completed and returned to the instructor at the second or third class meeting. Failure to do so may result in the loss of any credit earned in such courses.

GRADING SYSTEM

Graduate course achievement will be rated A (Excellent), B (Good), C (Poor but passing), F (Failure), WP (Withdrawn-Passing), WF (Withdrawn-Failing), INC (Incomplete), or AU (Audit). A student may change his registration from audit to credit or credit to audit status prior to the beginning of the fourth meeting of a class. A course in which part of the work is not completed for a valid reason will be recorded as INCOMPLETE, provided the student has arranged with the instructor before the end of the term to complete the assigned work within thirty calendar days following the official close of the term.

An incomplete course must be completed within thirty calendar days following the official close of the term, or a grade of F will be recorded. Students who earn grades of C or below (including WF) in more than two graduate courses (i.e., any course in which

the student enrolls for graduate credit after acceptance in a degree program) must withdraw from the program unless special permission to continue is recommended by the adviser, the Graduate Committee, and the Dean of the Graduate School.

GRADUATE AND UNDERGRADUATE CREDIT

Course titles in this Catalog followed by a U indicate courses which may be taken for undergraduate credit only. Those titles followed by a G indicate courses which may be taken for graduate credit only. Those titles followed by a UG indicate courses which may be taken for either undergraduate or graduate credit. The level of credit earned in a course must be that designated by the student at the time of registration. Requests for credit level changes must be received prior to the beginning of the fourth meeting of a class. A student who has not completed all requirements for the baccalaureate may not enroll in any course for graduate credit.

TRANSFER CREDIT

A student who has taken appropriate courses prior to acceptance by the Graduate School may request that up to fifteen graduate credits (including any credits earned in courses in which he is enrolled at the time of his acceptance) be accepted in partial fulfillment of degree requirements. These credits must have been earned in courses designated by the department as appropriate to the student's degree program and must receive the approval of the student's adviser. Approval is subject to the following conditions: 1) that not more than six of the fifteen credits being transferred are from an approved institution other than Bridgewater State College; and 2) that a grade of B or better has been earned in all courses completed prior to the student's acceptance by the Graduate School. A form entitled **Petition for Acceptance of Transfer Credit** should be obtained by the student from the Graduate School Office, signed by his adviser, and returned by the student to the Graduate School Office. If such credit is to be applied toward fulfillment of requirements for a master's degree, the student must submit the above form no later than the deadline indicated in the Calendar of the Graduate School. It should be noted that all transfer courses are subject to the regulation governing time limits. (No graduate course offered for the degree may be more than six years old when degree requirements are completed.)

After acceptance, a maximum of six graduate credits of grade B or better, taken at an approved graduate school other than Bridgewater State College, may be transferred if approved by the adviser. In no case, however, may more than a **total** of six appropriate credits be transferred from other graduate schools. Two transcripts of the courses taken off campus after acceptance must be sent directly to the Bridgewater State College Graduate School.

All courses to be used for degree credit must have the approval of the adviser and be recorded on the **Record of Graduate Program**.

THESIS

All M.A. and M.S. students, and those M.Ed. students who plan to submit a thesis, should obtain a copy of the brochure entitled **The Master's Thesis** from the Office of the Graduate School.

The major function of the thesis is to contribute to the student's scholarly development. In seeking approval of a thesis topic, the student is expected to convince those whose

approval is required that the topic is significant and that execution of the work will further his educational growth. Each graduate student should confer with his adviser at the earliest opportunity relative to his thesis topic and outline. It is essential that the student work closely with his adviser in all matters related to the thesis.

The student's thesis committee is comprised of the student's adviser, the chairman of the department in which the student is concentrating, and one other faculty member appointed by the departmental chairman. (If the student's adviser is also the departmental chairman, he should appoint two faculty members to complete the committee's membership.) The committee is chaired by the student's adviser.

It is the responsibility of the student to obtain three copies of the form **Approval of Thesis Topic and Outline** and submit the completed copies (original and two carbons) to his adviser for approval by the members of the Thesis Committee. The forms may be obtained at the Office of the Graduate School. The student's adviser should retain the original copy of the completed form and should return the two carbon copies to the student. The student retains one copy for his records and submits the other to the Office of the Graduate School. The form **Approval of Thesis Topic and Outline** must be completed and filed in the Office of the Graduate School not later than four months prior to the student's taking the Comprehensive Examination. If the student, with the approval of his adviser, changes his thesis topic, he must file revised copies of the above form in the Office of the Graduate School not later than two months prior to taking the Comprehensive Examination.

Students should refer to the course entitled **Research** which appears in this Catalog under their major department, as well as consult with their adviser relative to the matter of earning credit for research done in conjunction with a thesis.

Three unbound copies of the thesis must be deposited in the Office of the Graduate School at least one month prior to the completion of all other degree requirements. Each copy must contain an abstract of the thesis, with the abstract immediately following the title page of the thesis. **The Office of the Graduate School arranges for the binding of theses.**

COMPREHENSIVE EXAMINATION

While students are expected to make satisfactory progress in their course work, the accumulation of credit hours is not regarded as the sole index of a student's progress or as a guarantee that he will be granted a degree. Each student must give evidence that he can integrate information and ideas from the various areas in which he is studying. The principal instrument for measuring this achievement is the Comprehensive Examination. This examination may be written and/or oral, as determined by the student's department. It is based upon the area of concentration, as well as related fields, and may include work done on the thesis. A student who plans to take the Comprehensive Examination should file the form entitled **Examination Request**. This form should be completed and filed by the student in the Graduate Office no later than the deadline indicated in the Calendar of the Graduate School. **This examination may not be taken prior to the last term of course work, and must be taken within one term after the completion of all remaining degree requirements.**

A student who fails the Comprehensive Examination shall be given one further opportunity to take it after he has made substantial progress in whatever additional work may be prescribed by his adviser. The second Comprehensive Examination may not be taken

prior to the next examination period indicated in the Calendar of the Graduate School. Those who take the Comprehensive Examination will be notified of the results by mail.

COMMENCEMENT

Students who plan to receive a master's degree in February, June, or August, should request the form **Application for Degree** from the Graduate Office. This form should be completed by the student and filed, together with the faculty adviser's signed copy of the candidate's **Record of Graduate Program**, in the Graduate School Office during the last term of degree work, and no later than the deadline indicated in the Calendar of the Graduate School. Failure to file before the deadline will postpone degree conferral. A Commencement Fee of \$17.00 is required at the time of filing this application. No degree will be conferred and no degree transcripts will be issued unless all tuition and fees have been paid in full.

Diplomas are awarded at the June Commencement and also during the months of February and August. Students who receive their diplomas in February or August, as well as those who complete their degree work in May or June, should plan to attend the June Commencement and wear appropriate academic regalia. Information relative to Commencement is mailed in May.

In the event that a student does not receive his degree at the anticipated time, he must file a new **Application for Degree** form prior to the next applicable deadline indicated in the Calendar of the Graduate School.

GRADUATE DEGREE PROGRAMS

The following degree programs are offered through the Graduate School. Requirements for admission to and completion of these programs are found in this section of the Catalog of the Graduate School and also under the appropriate department or departments.

Master of Arts

- Master of Arts in Biology
- Master of Arts in Chemistry
- Master of Arts in English
- Master of Arts in History
- Master of Arts in Humanities

Master of Education

- Master of Education in Elementary Education
- Master of Education in Elementary School Mathematics
- Master of Education in Guidance
- Master of Education in Health Education
- Master of Education in Instructional Media
- Master of Education in Reading
- Master of Education in School Administration
- Master of Education in School Librarianship
- Master of Education in Secondary Education
(with a concentration in one of the following fields)

Behavioral Sciences—anthropology, psychology, sociology
Biology
Creative Arts—art, music, speech and theatre
Chemical Sciences
Earth Sciences
English
Geography
History
Humanities—English, philosophy, modern foreign languages
Mathematics
Modern Foreign Languages
Physical Sciences
Physics
Social Sciences—economics, history, political science
Speech and Theatre
Master of Education in Special Education
Master of Education in Special Education—Learning Disabilities

Master of Science

Master of Science in Physical Education

ADMISSION

Application

Students seeking admission to a program leading to a master's degree must hold a bachelor's degree from a four-year institution of acceptable standing. College seniors may be admitted on a conditional basis.

Applicants should specify the degree program (and also the area of concentration) when they request application forms. The Graduate School cannot send the appropriate application forms without this information. Any student who has filed material for admission to a given degree program or area of concentration and subsequently decides to apply for admission to another program or area of concentration must submit a written request as well as new application forms, new letters of reference appropriate to the proposed degree program, and advanced test scores of the Graduate Record Examination, if necessary. Such changes must be submitted prior to the deadline for receiving completed applications specified in the Calendar of the Graduate School.

All students seeking admission to a Master of Arts program, Master of Science program, and certain Master of Education programs (see departmental requirements) are required to have a formal interview with the chairman of the appropriate department prior to the deadline set in the Calendar of the Graduate School for completed applications.

Applicants to the Graduate School should make certain that the following are on file in the Office of the Graduate School:

1. **A formal application**, in duplicate. Application forms may be obtained from the Graduate Office.
2. **Three letters of recommendation**, in duplicate, which indicate an estimate of the applicant's ability to pursue successfully a graduate program in his proposed field of concentration. For M.Ed. applicants at least two letters must be from

faculty who have taught the applicant at the collegiate level (undergraduate or graduate). The third letter may be from a school administrator under whom the applicant has taught. For M.A. and M.S. applicants at least two letters must be from persons who have taught the applicant in the appropriate area of concentration. The third M.A. letter may be from any faculty member who has taught the applicant at the collegiate level, while the third M.S. letter may be from any faculty member who has taught the applicant at the collegiate level or from a school administrator for whom the applicant has taught. Only recommendations submitted on this form and sent by the reference directly to the Graduate School will be accepted. Forms for recommendations are available at the Graduate Office.

3. **The results of the Aptitude Test of the Graduate Record Examination.** The applicant must arrange to have his scores sent from the Educational Testing Service directly to the Dean of the Graduate School. Photocopies of scores and scores submitted by the applicant are not acceptable. Application forms and information relative to the Graduate Record Examinations may be obtained from the Graduate Office. Since there is up to a six weeks delay between the test date and the receipt of scores, applicants should take the test well in advance of the Graduate School's deadline for receipt of completed applications. (See the Graduate School Calendar.) In addition, applicants applying for a Master of Arts program must submit the appropriate advanced test score. Scores earned on any Graduate Record Examination (Aptitude and/or Advanced) are valid until September 30 following the fifth anniversary of the test date. Once the validity of scores has expired, the applicant must retake the appropriate tests. All applicants from countries where English is not an official language, must also submit scores on Educational Testing Service's Test of English as a Foreign Language (TOEFL) examination.
4. **Two copies of the official transcript of the applicant's undergraduate college record,** bearing the seal of the college. Applicants who have attended more than one undergraduate college, or who have completed course work beyond the bachelor's degree, should arrange to have duplicate transcripts of all course work sent directly to the Dean of the Graduate School. All transcripts must be sent by the college registrar directly to the Dean of the Graduate School. Graduates of Bridgewater State College should request the College Registrar to send transcripts to the Graduate Office. Applicants currently enrolled in the Division of Continuing Education should request the Division to send their transcripts to the Graduate Office.
5. In addition to the above, there may be special departmental requirements relative to the application. Such requirements, if any, are to be found under the section entitled **Departmental Requirements** in this Catalog.

Applicants who have successfully completed graduate courses, as well as those who hold a degree(s) in addition to the baccalaureate, must fulfill all application requirements as set forth in this Catalog.

An application is not complete, and no applicant will be considered for admission, unless all of the above documents have been received by the Dean of the Graduate School (and an interview held if required) on or before the appropriate deadline indicated in the Calendar of the Graduate School. It is the obligation of the student to make certain that his application documents are received in time. One month prior to each deadline for admission a notice will be sent to applicants listing the documents which have not been received. Applicants will be notified when their application folders are complete.

All transcripts and other documents submitted become the property of the Graduate School and will not be returned. Copies of transcripts and other documents will not be issued from the Graduate School Office.

Applicants should check the Calendar of the Graduate School relative to deadlines for submitting completed applications. Completed applications received after a deadline will be considered at the next admission date.

Action by the Department

The Dean of the Graduate School sends all completed applications to the academic department in which the applicant proposes to take his concentration. After reviewing these applications, departments make their recommendations to the Graduate Committee.

Action by the Graduate Committee

The Graduate Committee meets in October, January and May of each year to consider completed applications.

The Committee, after examining each applicant's credentials and the academic department's action, makes its recommendations to the Dean of the Graduate School. The Committee may recommend:

1. That the applicant be admitted to the Graduate School on a clear basis. Graduate students accepted with course deficiencies will be required to take prescribed undergraduate work without credit toward the degree.
2. That the applicant be admitted as a probationary student and that he be reconsidered for admission to the Graduate School after the satisfactory completion of twelve credits of graduate work approved by his adviser. A probationary student should file a form, **Petition for Removal from Probationary Status**, when he has completed twelve credits of graduate work, with a grade of B or better, which have been approved by his adviser.
3. That the applicant be admitted conditionally, pending the awarding of a baccalaureate. A college senior who is admitted to the program on a conditional basis should request his college to forward complete baccalaureate transcripts as soon as possible.
4. That the applicant not be admitted.

The successful completion of graduate courses prior to application shall not obligate the academic department or the Graduate Committee to recommend an applicant for acceptance.

Action by the Dean of the Graduate School

The Dean, after reviewing the recommendations of the academic department and the Graduate Committee, notifies the applicant of the action taken. The student will be assigned an adviser at this time. The Graduate School also sends the student and his adviser copies of the form **Record of Graduate Program**. It is important that the student telephone his adviser at the College and make an appointment for planning his program. The student should bring his copy of the **Record of Graduate Program** to every conference with his adviser. The adviser's copy is sent to the Graduate School when the student applies for his degree. Program planning conferences should be arranged well in advance

of each term, e.g., in May for courses offered during the summer and fall terms and in November for courses offered during the spring term.

Conferences with advisers may be difficult to arrange during holidays and vacations, in June prior to summer session registration, and between the close of summer session and registration for the fall term. During these times, all communication should be by mail or telephone.

CHANGES IN PROGRAM

Any request for change in degree program must be made prior to the deadline for receiving completed applications as indicated in the Calendar of the Graduate School. A student wishing to change his program must: 1) petition the Graduate Committee in writing, through the Dean of the Graduate School; 2) file a new application; 3) submit new references appropriate to the proposed program; 4) submit any additional material appropriate to the new program; and 5) arrange for an interview, if required. Credits earned in one degree program may be transferred to another degree program with the approval of the new adviser.

WITHDRAWAL FROM PROGRAM

Students who decide to withdraw from a degree program should notify the Graduate School of their intentions in writing as soon as possible.

GENERAL REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Credits and Thesis

General requirements for the degree shall be a minimum of thirty approved graduate credits, including a thesis approved by the department. The thesis should include results of original research and give evidence of high scholarship. All credits must be derived from courses designated by the department as appropriate to the student's degree program and must have the endorsement of the adviser. Credit may be earned in conjunction with the thesis. Unless otherwise indicated by the major department, a maximum of nine of the thirty approved graduate credits may be allowed for the thesis. Each student must enroll in the research course (—502) listed under his major department. Students should consult the section in this Catalog entitled **Thesis** and request the brochure entitled **The Master's Thesis** from the Graduate School Office. Ordinarily, at least one-half of the degree credits must be earned in courses limited to graduate students. Such courses are designated in this Catalog by the letter G.

Preliminary Examination

A Preliminary Examination is given during the semester following the successful completion of twelve credits (including transfer credits) of approved graduate work. This examination may be written and/or oral. Its purposes are: 1) to determine the degree of skill achieved in relating and integrating graduate work completed to date; 2) to ascertain the readiness of the student for additional graduate work; and 3) to enable the adviser to plan the remainder of the student's program. The Graduate School will apprise the student of his performance on the Preliminary Examination. Unsatisfactory performance may require the student to take additional course work and a second examination. If the

student fails to perform satisfactorily a second time, he will be dropped from the degree program.

Foreign Language Examination

A reading knowledge of one foreign language, specified by the major department, is required. Each student should consult with his adviser relative to departmental language requirements and procedures for taking the examination.

The foreign language requirement must be met at least two months prior to taking the comprehensive examination. The results of this examination are submitted to the Graduate School by the adviser on the form entitled **Examination Results**.

Comprehensive Examination

All students are required to pass a comprehensive examination. (See the section of this Catalog entitled **Comprehensive Examination**.)

Departmental Requirements

Students are required to complete satisfactorily all departmental requirements prescribed for their degree programs. Each department establishes its own departmental concentration. Students should thoroughly familiarize themselves with the material presented under their major department or departments, as well as that found in the sections of the Catalog entitled **General Information** and **The Graduate School**.

GENERAL REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

Credits and Thesis (optional)

General requirements for the degree shall be a minimum of thirty approved graduate credits. These credits must be derived from courses designated by the department as appropriate to the student's degree program and must have the endorsement of the adviser. A thesis is optional in most Master of Education programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include results of original research and give evidence of high scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under his major department. Students should consult the section of the Catalog entitled **Thesis** and request the brochure entitled **The Master's Thesis** from the Graduate School Office. Ordinarily, at least one-half of the degree credits must be earned in courses limited to graduate students. Such courses are designated in this Catalog by the letter G.

Required Courses

All students enrolled in a program leading to the degree of Master of Education must complete the following courses:

- ED 500 Research and Evaluation
- ED 560 American Public School Today

In addition to the above, all students must complete at least one of the following courses. The course or courses elected from this group must be approved by the adviser and

should be selected on the basis of their relationship to the students program as well as to certification requirements.

- ED 505 Historical Foundations of Education
- ED 520 Psychological Foundations of Education
- ED 580 Philosophical Foundations of Education
- ED 590 Sociological Foundations of Education

Those enrolled in a program leading to the degree of Master of Education in Secondary Education with a concentration in an academic area must complete a methods course in that area. This course must be approved by the adviser. Any student who has taken such a methods course at either the undergraduate or graduate level may be exempted from this requirement, subject to approval by his adviser. Teaching experience will not be accepted in lieu of the required methods course. (The methods course should be as specific as possible. Appropriate examples are ED 312 Teaching Social Studies in the Secondary School UG, ED 314 Teaching English in the Secondary School UG, ED 319 Teaching Science in the Secondary School UG, ED 322 Teaching Mathematics in the Secondary School UG, ED 324 Teaching Modern Foreign Language in the Secondary School UG. However, ED 440 Methods and Materials in Secondary Education UG is **not** an appropriate course for degree program students.) See also the section of this Catalog entitled **Department of Secondary Education**.

Elective Courses

All electives to be taken for degree credit must be approved by the student's adviser prior to registration.

Those enrolled in a program leading to the degree of Master of Education in Secondary Education with a concentration in an academic area must earn a minimum of 15 elective graduate credits in the area of concentration. Additional elective credits may be earned in either the area of concentration and/or professional education according to individual needs, thus providing some flexibility in the program.

Teaching Requirement

All students enrolled in a program leading to the degree of Master of Education are required to fulfill the degree prerequisite of teaching experience. This requirement may be met, unless otherwise indicated in this Catalog under the department in which the student is concentrating, by one of the following procedures:

1. **Teaching Experience.** One full semester of successful classroom teaching experience at the appropriate level as a full-time employee in an accredited public or private school.
2. **Student Teaching.** A minimum of 6 credits of student teaching earned at an institution of acceptable standing prior to or after acceptance in a master's degree program at Bridgewater State College. This experience may have been at either the undergraduate or graduate level. Credits earned in conjunction with student teaching may not be used to meet the minimum graduate credit requirements for the degree.

Those who plan to student teach through Bridgewater State College after acceptance should familiarize themselves with and meet the prerequisites for the student teaching course most appropriate to their program, i.e., ED 490 Supervised Teaching in the Public Schools-Secondary U, or ED 491 Supervised Teach-

ing in the Public Schools-Special Education U, or ED 492 Supervised Teaching in the Public Schools-Elementary U. (See the Departments of Secondary Education, Educational Services, or Elementary Education in this Catalog). Students should request the Graduate School to certify their eligibility by letter to the Director of Teacher Preparation and Placement. An application form entitled **Application for Off-Campus Student Teaching in the Public Schools** should be obtained from the Office of the Director of Teacher Preparation and Placement. The student should complete the application and file it with the Division of Continuing Studies at least 90 days prior to the beginning of student teaching. The student must register for supervised teaching through the Division of Continuing Studies after his application for student teaching has been approved. Those who plan to student teach through an institution of higher learning other than Bridgewater State College should consult with the Assistant to the Dean of the Graduate School concerning this matter.

3. **Certification:** The possession of a certificate appropriate to the student's area of specialization issued by the Department of Education of the Commonwealth of Massachusetts.

Certification Requirement

All students enrolled in a program leading to the degree of Master of Education should work closely with their advisers to ensure that the certification requirements of the Commonwealth of Massachusetts in their area of specialization are met.

Comprehensive Examination

All students are required to pass a comprehensive examination. (See the section of this Catalog entitled **Comprehensive Examination**.)

Departmental Requirements

Students are required to complete satisfactorily all departmental requirements prescribed for their degree programs. Each department establishes its own departmental concentration. Students should thoroughly familiarize themselves with the material presented under their major department or departments as well as with that found in the sections of the Catalog entitled **General Information** and **The Graduate School**.

GENERAL REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

At present the degree of Master of Science is offered only in the field of Physical Education. For information regarding this degree, consult the requirements outlined in this Catalog under the Departments of Health and Physical Education for Men and Women.

DEPARTMENTAL REQUIREMENTS AND COURSE DESCRIPTIONS

Key to letter designations which follow course titles.

U—Course may be taken for undergraduate credit only

UG—Course may be taken for either undergraduate or graduate credit

G—Course may be taken for graduate credit only

DIVISION OF THE BEHAVIORAL SCIENCES

ACTING DIRECTOR: PROFESSOR BROWN

Anthropology

Psychology

Sociology

The Division of the Behavioral Sciences offers a program leading to the degree of Master of Education in Secondary Education with a concentration in behavioral sciences. This program is designed primarily for teachers and future teachers of behavioral sciences. Course work in urban, African and black studies may be included in the student's program.

The Division of Behavioral Sciences requires that all applicants for admission to its degree program be interviewed prior to being considered for admission. Please contact the Acting Director.

In addition to meeting general degree requirements, the student must complete the concentration requirement by electing courses appropriate to his degree program. All courses must be approved by the adviser. Courses which may be taken are listed under the several departments within the Division of the Behavioral Sciences.

DEPARTMENT OF ANTHROPOLOGY

Acting Chairman: Professor Horner

Assistant Professors: Mueller, Stewart, Thomas

Instructor: Gianfortoni

The Department of Anthropology does not offer a program at the master's degree level at this time. Anthropology courses may be taken in a program leading to the degree of Master of Education in Secondary Education with a concentration in the behavioral sciences. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

AN 201 General Anthropology U 3 credits

Origin of man. Physical evolution of man. Divisions of anthropology, cultural history, and development. Basic concepts and methods of analyzing cultures.

AN 202 Cultural Anthropology U 3 credits

Science of human behavior in different cultural contexts. Man's biological and cultural variability; human societies of the present and recent past around the world; dynamics of cultural change.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

AN 205 Culture in Process UG 3 credits

Use of the inductive approach to examine the effect of culture on individuals and groups. Discussion and study of applied anthropological techniques used in planned programs to assist in adopting social change. Prerequisite: AN 201 or AN 202.

AN 207 Primitive Religion UG 3 credits

The origins and development of religion in society, myth, ritual, magic and religious specialists. Australian, African, American Indian, Near Eastern folk religion, and folk religion of the Negro in the new world. Prerequisite: permission of the Instructor.

AN 208 Religion in the Cultures of Asia UG 3 credits

A survey of the beliefs and practices of Hinduism, Buddhism, and Islam, as related to their societal and cultural backgrounds. Attention will be given to aboriginal religions of the South Pacific and to the ancient religions of China and Japan, Taoism, Confucianism, and Shinto. The "great tradition" of philosophy will be compared with the "folk tradition" and actual practices of each religion in Asia today. Prerequisite: permission of the Instructor.

AN 210 Introduction to Folklore UG 3 credits

The meaning and subdivisions of folklore: myth, folktale, proverb, riddles—analyses of story elements, and major folklore areas. Prerequisite: permission of the Instructor.

AN 301 Introduction to Physical Anthropology UG 3 credits

An introduction to the principles of Physical Anthropology as it relates to human evolution. Examination of present evidence, in an attempt to discover the origin of man. Such aspects of progress as homeostasis, primate radiation, body structure and posture, feeding ecology and behavior, evolution of the head and reproduction. Prerequisite: AN 201, or one year of natural science.

AN 302 Introduction to Archaeology UG 3 credits

Examination of field methods, systems of data recording, analytical methods, and their conceptual basis. Abstract theory closely integrated with specific case material. Laboratory exercises in application of artifact analysis. Prerequisite: AN 201, or one year of natural science.

- AN 304 Personality and Culture UG** *3 credits*
 A study of the interrelationships between individual and society, focusing on 1) major theories about the formation of personality by the surrounding structures, including Freudian theory and the Marxist concept of alienation; 2) a cross-cultural study of childhood; 3) adolescence in changing America; 4) several conceptions about the contemporary American personality as compared with personality structures in traditional society. Prerequisite: AN 201, or major in behavioral sciences.
- AN 305 Peoples and Cultures in India UG** *3 credits*
 A survey of social structure in India, with emphasis on 1) the caste system; 2) the traditional Hindu and Islamic cultures; and 3) the effects of urbanization and modernization upon traditional structures. Prerequisite: AN 201 or ES 452.
- AN 310 Peoples and Cultures of Africa South of the Sahara UG** *3 credits*
 A survey of present cultures of tropical and subtropical Africa, problems of colonialism, acculturation, new nationalism and rapid social change. Prerequisite: AN 201, ES 261, SO 202.
- AN 320 West Indian Negro Cultures in the Caribbean UG** *3 credits*
 Survey of the West Indian Negro cultures in the West Indies including social organization, religion, political development and adjustment to modern conditions. Prerequisite: AN 201, SO 203, or ES 261.
- AN 321 Comparative Social Structures UG** *3 credits*
 A comparison of social structures of selected non-western societies. Stress is placed upon the meaning of society, structure, and methods of comparison. Prerequisite: AN 201, or permission of the Instructor.
- AN 322 Seminar: Afro-Asian Urban Cultures UG** *3 credits*
 Description and analysis of urban cultures in Africa and Asia with special attention to problems of rapid social change, acculturation, political and economic developments. Prerequisite: AN 201, ES 261, and SO 202.
- AN 323 Theory of Culture UG** *3 credits*
 A survey of early schools of cultural theory including Adolf Bastian, Lewis Morgan, Edward B. Tylor, the British Diffusionists, the German Historical-Diffusionist School, French Sociology, Functionalism, including Franz Boas and Malinowski. Current functional evolutionary theory. Prerequisite: AN 205
- AN 324 Human Evolution and Variation UG** *3 credits*
 Application of the general evolutionary theory to man; primatology, human paleontology, race formation, cultural effects. Prerequisite: AN 301.
- AN 325 Survey of West African Cultures UG** *3 credits*
 An introduction to contemporary diversity in relation to language grouping, technologies, national problems and opportunities. Prerequisite: AN 201, ES 261, and SO 202.
- AN 326 Survey of East African Cultures UG** *3 credits*
 An introduction to the cultural diversities in relation to language grouping, technologies, national problems and opportunities with emphasis on the present. Prerequisite: AN 201, ES 261, and SO 202.

AN 327 Seminar: Urban Centers in East and West**Africa UG****3 credits**

Major African cities and the culture of their hinterland focussing on cities like Nairobi, Kanipala, Kairo, Kumase, and Monrovia and the role these cities play in shaping the lives of people in the surrounding territories. Prerequisite: AN 201, ES 261, and SO 202.

AN 328 Archaeology of North America UG**3 credits**

Survey of some of the historic and prehistoric Indian cultures in North America. Prerequisite: AN 201.

AN 402 Seminar on Field Methods UG**3 credits**

Methods of field work for cultural anthropologists working in ongoing societies; design of field studies; techniques for collection and analysis of empirical data, experimental field projects. Prerequisite: AN 201.

AN 404 Seminar: Anthropology for Elementary**Education UG****3 credits**

Theory and techniques of teaching Anthropology to elementary students. Special course material in physical and cultural anthropology and prehistory and archaeology. Grades 1 thru 6. Prerequisite: AN 201.

AN 406 Archaeological Field Excavation, Survey and**Research in Prehistoric Village sites in New England UG****3****credits**

Intensive training in excavation techniques, recordation, analysis, and interpretation of archaeological materials. Prerequisite: AN 302.

AN 502 Research G**credit to be arranged**

Original research undertaken by an individual in the field of anthropology. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

AN 503 Directed Study G**credit to be arranged**

Directed study in the field of anthropology. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF PSYCHOLOGY

Chairman: Professor Lester

Associate Professors: Greenwald, Hollis, Schippers, Scroggs

Assistant Professor: Drake

The Department of Psychology does not offer a program at the master's degree level at this time. Psychology courses may be taken in a program leading to the degree of Master of Education in Secondary Education with a concentration in the behavioral sciences. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

PY 200 General Psychology U 3 credits

Basic psychological processes such as perceiving, learning, thinking, emotion, and motivation, as well as more complex areas such as personality, adjustment, and social influences on behavior; major conclusions and basic methods of study in the field.

Py 222 Psychology of Learning UG 3 credits

An examination of the theoretical and research aspects of the learning process. Theories of Learning will be examined in relation to experimental design, and the learning situation. Prerequisite: PY 200.

PY 224 Child Growth and Development U 3 credits

Growth and development of the child from birth through pre-adolescence. Biological, psychological, and social factors as well as moral forces which influence child behavior. Prerequisite: PY 200.

Py 226 Adolescent Psychology U 3 credits

The major theories related to pre-adolescent and adolescent development. Physical, mental, moral, emotional, personality, and social aspects will be considered. Prerequisite: PY 200.

The following courses may be taken for graduate credits. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades, may be used in partial fulfillment of degree requirements.

PY 227 Psychology of Exceptional Children UG 3 credits

Emphasis will be on identification and understanding of the growth and development of exceptional children. Special techniques considered appropriate to the needs of such children will be treated. Emphasis will also be placed on the contribution the classroom teacher can make to the education and welfare of the mentally, emotionally, and physically handicapped child as well as the academically talented. Prerequisites: PY 200 and PY 224.

PY 228 Psychology of Mental Retardation UG 3 credits

Origins (genetic; organic; sensory, maternal, and cultural deprivation), manifestations, diagnostic aids, therapeutic and remedial techniques. Prerequisite: PY 200.

PY 229 Abnormal Psychology UG *3 credits*
A systematic study of behavior pathology, symptom patterns, etiology, prognosis, and prevention. Understanding and care of mental illness. Prerequisite: PY 200.

PY 230 Social Psychology UG *3 credits*
The individual in social situations; attitude formation and change, culture and society, language and communication, leadership and group dynamics, personality, characteristics and interpersonal relationships. Classic studies in prejudice, brainwashing, competition, and small group behavior. Prerequisite: PY 200.

PY 231 Psychology of Personality UG *3 credits*
Basic concepts in the field of personality, organized around such topics as motivation, personality structure and dynamics, personality development, assessment, and therapy. Problems and styles of adjustment will be considered. Prerequisite: PY 200.

PY 302 Psychological Theory UG *3 credits*
Fundamental assumptions underlying the psychological enterprise, and issues which are the subjects of continuing debate in the field—e.g. causality, determinism, methodological approaches, the control of behavior, conceptions of the nature of man. Prerequisite: at least four courses in Psychology.

PY 304 Attitude and Personality Measurement UG *3 credits*
Principles of construction of attitude scales and personality assessment techniques, including both projective and inventory-type techniques. Issues and controversies in psychological measurement. Prerequisites: PY 231, or PY 302, and MA 110.

PY 306 Experimental Psychology UG *3 credits*
The shaping of behavior, laboratory conditioning, reinforcement, approach and avoidance of a goal, discrimination and generalization of physical cues, animal learning experiments. Experimental approaches to the study of human behavior. Prerequisite: PY 200.

PY 308 Experimental Social Psychology UG *3 credits*
Recent research in social psychology, including developments in methodology, theory, and research findings. Situational and individual difference approaches useful in testing theories and hypotheses and in resolving conflicting findings of previous research. Research project required of student. Prerequisites: PY 230 and MA 110, or its equivalent.

PY 310 Seminar: Clinical Psychology UG *3 credits*
Survey of diagnostic and treatment procedures and resources in clinical guidance work with children and adults; professional duties and skills of the clinical psychologist. Prerequisites: PY 229 and PY 231.

PY 312 Seminar: Attitude Change Research UG *3 credits*
Empirical research in persuasion, communicator credibility, opinion differences, commitment, one-sided (pro) and two-sided (pro and con) arguments, coercion and threat, emotional and rational arguments. Theories of attitude change, including dissonance theory, balance theory, congruity theory, and assimilation and contrast theory. Prerequisites: PY 230 and MA 110.

PY 326 Seminar: Research Methods in the Behavioral Sciences UG**3 credits**

The strategies of scientific research (hypothesis formation, experimental design, statistical analysis, data interpretation) and the tactics of obtaining reliable information and minimizing artifact (survey methods, various kinds of interviews, individual difference measures, controlled laboratory conditions). Offered only to Senior majors in Psychology or another Behavioral Science. Prerequisites: MA 110 and at least 6 courses in Behavioral Science.

PY 502 Research G**credit to be arranged**

Original research undertaken by an individual in the field of psychology. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

PY 503 Directed Study G**credit to be arranged**

Directed study in the field of psychology. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for and M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF SOCIOLOGY

Chairman: Professor Brown
Associate Professor: Greene
Assistant Professor: Thomas
Instructor: Calderon

The Department of Sociology does not offer a program at the master's degree level at this time. Sociology courses may be taken in a program leading to the degree of Master of Education in Secondary Education with a concentration in the behavioral sciences. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

- SO 204 Sociology of Religion UG** *3 credits*
Comparative study of religious systems and institutions, function and role of religion and the church in society; professional status, history and relations of the clergy. Prerequisite: SO 202, or permission of the Instructor.
- SO 303 The Family UG** *3 credits*
The family as a social institution in terms of its historical and cultural development. Analysis of psychological and social factors in contemporary family life. Prerequisite: SO 202, or AN 201, or AN 202.
- SO 304 Social Stratification UG** *3 credits*
Historical and contemporary examples of the range of stratification systems. Problems of class and caste, conflicts. Trends in class system and social mobility, with special attention given to similarities and differences of modern industrial societies. Prerequisite: SO 202, or AN 201, or AN 202.
- SO 305 Sociology of Education UG** *3 credits*
Educative factors in the social process. Some attention will be given to preliterate cultures and the functioning of the dominant institutions. Major emphasis on the relation of stratification to education, and of education to horizontal and vertical mobility. Social class and ethnic backgrounds will be examined for their relationship to the functioning of schools. Recent, well-known empirical findings will be discussed. Prerequisite: SO 202, or permission of the Instructor.
- SO 306 Urban Sociology UG** *3 credits*
A sociological and ecological analysis of the city in terms of urban institutional and personality patterns, folkways and mores. Ecological process and structure. The city as center of dominance over a trade area and hinterland. Prerequisite: SO 202, or ES 353, or AN 201, or AN 202.
- SO 307 Urban Problems UG** *3 credits*
Poverty, intergroup conflict, breakdown in education, crime, delinquency and urban riots will be examined. Special emphasis will be on new approaches in education in the city—decentralization, community control, relevant curriculum. This course is especially planned for students preparing for urban teaching. Experience in a problem area will be an integral part of the course. Prerequisite: SO 202, or ES 353, or AN 201, or AN 202.
- SO 309 Introduction to Social Welfare UG** *3 credits*
Institutional analysis of social welfare, social agencies. Sociological aspects of social work as a profession. Prerequisite: SO 202.
- SO 310 Indian Cultural and Social Organization UG** *3 credits*
A descriptive and analytical examination of societies of the Indian subcontinent dealing with their cultural histories, economic, social, political and religious institutions. Problems of Cultural and social change. Prerequisite: SO 202, or AN 201, or AN 202.
- SO 312 Urban Minority Relations UG** *3 credits*
A study of the relations between ethnic and racial groups in the United States, with particular attention to the Boston Irish, the Boston Italians, and the Negro-Americans. Concentration will be upon the Negro in America and the problems of identity. Prerequisite: SO 202, or AN 201, or AN 202, or ES 353.

SO 314 Case Work Methods UG**3 credits**

Case work is based on recognition of internal psychological problems and external social causes of a individual's failure to function satisfactorily. Techniques of interviewing. Theoretical study of human behavior. Experience in social work agencies. Prerequisite: SO 309.

SO 316 Social Problems I: Non-conforming Behavior UG**3 credits**

This course will deal with contemporary problems which are reflected in the behavior of individuals but whose origins and causes lie outside of individuals. Topics treated will include drugs, dope-addiction, crime, juvenile delinquency, divorce and other family problems, mental illness and other health problems, social class, and selected social issues. Attention will be given to social factors regarded as major contributions to these problems. Prerequisite: SO 202.

**SO 318 Social Problems II: Structural Discontinuities
and Value Conflicts UG****3 credits**

A continuation of Social Problems I. Unemployment, mass poverty, problems of mass communication, world population growth, war, and other major problems involving total societal organizations. Problems will be treated from the standpoint of social change, resulting disorganization, and value conflict. Prerequisite: SO 202, SO 316, or permission of the instructor.

SO 320 The Sociology of Underdevelopment UG**3 credits**

The study of the "Third World," its kinship, economic, religious, political and international roots, present functions and possible future consequences. Prerequisite: SO 202, or AN 201.

SO 322 Field Experience Internship in Urban Relations UG**6 credits**

Direct field-experience contacts on day to day basis with selected urban social problems, with low income families, and with social agencies that are serving the disadvantaged. Students will become familiar with selected socio-cultural experiences associated with poverty. Useful for those who plan to become teachers in inner-city schools, employees in social work agencies, and/or who intend employment in related community positions. Prerequisites: SO 202 and permission of the Instructor.

SO 326 Complex Organizations UG**3 credits**

This course will deal with the emergence, structure, function, and social significance of complex organizations. Emphasis will be placed upon the results of research in hospitals, schools, prisons, and military and industrial organizations. Some attention will be given to informal associations and organizational change. Prerequisite: SO 202, or permission of the Instructor.

SO 328 Criminology UG**3 credits**

This course will be concerned with theories of crime causation, and perspectives on administration, treatment, prevention, and prediction. Consideration will be given to the influence of social class and other factors in criminal behavior. Prerequisite: SO 202, or permission of the Instructor.

SO 400 Seminar: Social Theory UG 3 credits

The history of social theory and selected topics in modern social theories, analysis of alternative conceptual approaches and their methodological requirements. For majors in Sociology or Behavioral Sciences. Prerequisite: SO 202, or permission of the Instructor.

SO 402 Seminar: Research Methods in Sociology UG 3 credits

Application of scientific methods to the analysis of social phenomena, methodological orientation in sociology, types of research procedure, nature of sociological variables. For majors in Sociology or Behavioral Sciences. Prerequisite: SO 202, or permission of the Instructor.

SO 411 Types of Asocial Personalities I UG 3 credits

Intended for the mature undergraduate or graduate student. It uses the clinical method of instruction, having available, live case material. Topics covered include the development of asocial personalities, especially the alcoholic, drug addict, anti-social retarded, and sexually deviated. Prerequisite: SO 280 (An Introduction to Sociological Analysis U).

SO 412 Types of Asocial Personalities II UG 3 credits

The intent and method is the same as in SO 411, Asocial Personalities I. The varieties of psychoses, assaultive epilepsies, and organic brain damages are considered. Current methods of detection and treatment are outlined. Prerequisite: SO 411 (Types of Asocial Personalities I UG)

SO 502 Research G credit to be arranged

Original research undertaken by an individual in the field of sociology. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

SO 503 Directed Study G credit to be arranged

Directed study in the field of sociology. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DIVISION OF THE CREATIVE ARTS

DIRECTOR: PROFESSOR RIDLON

Art

Music

Speech and Theatre

The Division of the Creative Arts offers a program leading to the degree of Master of Education in Secondary Education with a concentration in creative arts. This program is designed for teachers and future teachers of creative arts. In addition to meeting general degree requirements, the student must complete the concentration requirement by electing courses appropriate to his degree program. All courses must be approved by the adviser. Courses which may be taken are listed under the several departments within the Division of the Creative Arts.

DEPARTMENT OF ART

Chairman: Assistant Professor Droege

Associate Professor: Tebbetts

Assistant Professors: Boyko, Kendall

Instructors: Hausrath, Heller

The Department of Art does not offer a program at the master's degree level at this time. Art courses may be taken in partial fulfillment of the creative arts concentration for the degree of Master of Education in Secondary Education with a concentration in creative arts. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

AR 270 Basic Design UG

3 credits

Two and three dimensional surfaces and their structural possibilities. Elements of plastic expression related to increasingly complex concepts of space and form arrangement.

AR 272 Drawing I UG

3 credits

Basic concepts: perspective, modeling in light and dark, contour drawing. Exploration of various media; pencil, pen and ink, charcoal, ink wash, etc.

AR 273 Drawing II UG

3 credits

Advanced projects will be planned according to the individual's style development and media preference. Prerequisite: AR 272 or permission of the Instructor.

- AR 280 Understanding the Arts UG** *3 credits*
Development of a frame work for visual understanding and enjoyment. Analytical techniques applied to specific objects chosen for study. Attention focused on social, historical, and psychological factors. Assigned readings and museum visits.
- AR 285 Textile Design I UG** *3 credits*
Design as related to weaving, knotting, and crewel work. Student may choose according to individual interest.
- AR 286 Textile Design II UG** *3 credits*
Advanced problems and techniques. Prerequisite: AR 285 or permission of the Instructor.
- AR 287 Painting I UG** *3 credits*
Basic skills, picture organization, and oil painting techniques. Students will find individual solutions to assigned problems. Field trips to museums and galleries.
- AR 288 Painting II UG** *3 credits*
Advanced projects will be planned according to the individual's style development. Prerequisite: AR 287 or permission of the Instructor.
- AR 291 History of Art UG** *3 credits*
Major developments in art from the Prehistoric through the late Gothic. Style is examined in relation to the historical process. Assigned readings and museum work. Prerequisite: AR 110 or AR 280, or permission of the Instructor.
- AR 292 History of Art II UG** *3 credits*
A continuation of AR 291 beginning with the Renaissance through the Modern era. The historical approach supplemented with analysis of stylistic problems. Assigned readings and museum work. Prerequisite: AR 291, or permission of the Instructor.
- AR 300 Watercolor Painting G** *3 credits*
Introduction to transparent watercolor painting. Emphasis on mastery of watercolor techniques and pictorial composition.
- AR 374 Art for Special Education UG** *3 credits*
Art education and theory and direct experience with a variety of materials and processes adapted to the needs of special education.
- AR 375 Materials and Methods UG** *3 credits*
Direct, creative experience with materials and processes related to the teaching of art in the public schools.
- AR 376 Wood Design UG** *3 credits*
An introduction to wood as a material of creative expression. Instruction will include the use of both hand and power tools. Emphasis will be on the aesthetic as well as the utilitarian use of the materials.
- AR 377 Glassblowing I UG** *3 credits*
Glass as a means of creative expression. Emphasis is upon the basic forming techniques and methods of design in glass. Prerequisite: permission of the Instructor.

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- AR 378 Glassblowing II UG** *3 credits*
Further exploration of glassblowing. Emphasis on studio equipment, design, and advanced technique. Prerequisite: permission of the Instructor.
- AR 379 Sculpture UG** *3 credits*
Design experimentation with traditional and new techniques. Media will include wood, metal, and resins. Three two-hour periods weekly.
- AR 380 Ceramic Design UG** *3 credits*
Basic wheel forming and construction. Techniques in clay. Three two-hour periods weekly.
- AR 381 Wheel Throwing UG** *3 credits*
Advanced problems and experiences on the potters wheel, and aesthetics of ceramic design. Three two-hour periods weekly. Prerequisite: AR 380 or permission of the Instructor.
- AR 382 Clay and Glazes UG** *3 credits*
Advanced work in the chemistry and compounding of clay and glaze materials. Three two-hour periods weekly. Prerequisite: AR 380 or permission of the Instructor.
- AR 383 Metal Design I UG** *3 credits*
Basic design, construction, and forming techniques. Jewelry, constructed forms, sculpture. Three two-hour periods weekly.
- AR 384 Metal Design II UG** *3 credits*
Advanced problems and techniques. Three two-hour periods weekly. Prerequisite: AR 383 or permission of the Instructor.
- AR 385 Advanced Jewelry Design UG** *3 credits*
Specialized techniques for the design and creation of jewelry in precious metals, and experimental construction techniques with these metals. Three two-hour periods weekly. Prerequisite: AR 383 or permission of the Instructor.
- AR 387 Introduction to Printmaking UG** *3 credits*
An introduction to the basic methods, materials and processes used in printmaking. Three two-hour periods weekly.
- AR 390 Interior Design UG** *3 credits*
Traditional and contemporary styles in furniture and interior design studied in illustrated lectures and field trips. Problems in selection and arrangement of home furnishings.
- AR 394 Renaissance Art and Architecture UG** *3 credits*
The development of the arts of architecture, painting, and sculpture in the Early and High Renaissance, with special emphasis of their interrelationships and their relation to the artistic theories and cultural ideals of the time.
- AR 395 Baroque Art UG** *3 credits*
Mannerist and Baroque styles of the 16th through 18th centuries will be studied, with emphasis on their origins in Italy and development through western Europe.

AR 396 Modern Art UG **3 credits**

Involves a study of painting, sculpture and architecture from Neo-Classicism to the present. Emphasis will be placed on major contemporary art movements.

AR 398 Arts of the Far East UG **3 credits**

A selective review of major achievements in the Arts of the Asiatic tradition, including those of India, Indonesia, China, Korea, and Japan. Comparison, when appropriate, with the arts of the West.

AR 399 American Art and Architecture G **3 credits**

The art of the United States from 1650 to the present. Attention given to painting, sculpture, and architecture as well as the minor arts. Key monuments and influences.

AR 400 Primitive Art UG **3 credits**

An investigation of the formal art properties and aesthetic qualities of Primitive Art, and an examination of the physical, psychological and sociological backgrounds which brought this art into being.

AR 502 Research G **credit to be arranged**

Original research undertaken in the field of art. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

AR 503 Directed Study G **credit to be arranged**

Directed study in the field of art. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduates credits approved by the student's adviser.

DEPARTMENT OF MUSIC

Chairman: Professor Falkner

Associate Professors: Ferry, Gannon, Hayward

Assistant Professor: Liberles

Instructors: Rinald, Santos

The Department of Music does not offer a program at the master's degree level at this time. Music courses may be taken in partial fulfillment of the creative arts concentration for the degree of Master of Education in Secondary Education with a concentration in creative arts, if approved by the adviser. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

MU 251 Choral Techniques UG *3 credits*
Investigation and study of voice, problems, unison and part singing, children's literature, solfeggio, melodic and rhythmic dictation. Prerequisite: MU 240 or permission of the Instructor.

MU 255 Music Materials for Elementary Teachers UG *3 credits*
Included singing, use of instruments, listening, reading music and rhythmic activity. Prerequisite: MU 240 or permission of the Instructor.

MU 355 Creative Activities in Elementary School Music UG *3 credits*
Practical experiences offered in free and directed rhythmic responses, use of melody, percussion and chording instruments, use of the piano and singing activities. Prerequisite: MU 240 and 255, or permission of the Instructor.

MU 363 Music of the Renaissance and Baroque Periods UG *3 credits*
A study of vocal and instrumental, sacred and secular music through readings, lectures, listening and discussion of selected compositions representative of these two periods. Prerequisite: MU 160 or permission of the Instructor.

MU 364 Music of the Classical and Romantic Periods UG *3 credits*
A study of vocal and instrumental music of these two periods through selected readings, lectures, listening and discussion. Prerequisite: MU 160 or permission of the Instructor.

MU 365 Music of the Contemporary Period UG *3 credits*
A study of present day music and its relationship to the past, includes experimental and electronic developments; readings, lectures, listening and discussion. Prerequisite: MU 160 or permission of the Instructor.

MU 366 Music of the Opera UG *3 credits*
A listener's approach to opera with representative examples from Peri to present day composers. Words by composers from Germany, France, and Italy will be studied along with contributions from England and America. Prerequisite: MU 160 or permission of the Instructor.

MU 502 Research G *credit to be arranged*
Original research undertaken by an individual in the field of music. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

MU 503 Directed Study G***credit to be arranged***

Directed study in the field of music. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of a least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF SPEECH AND THEATRE

Chairman: Associate Professor Barnett

Associate Professors: DuBin, Pitts, Warye

Assistant Professors: Dunne, Friedman, Levine

Instructors: Miskelly, Wuschke

The Department of Speech and Theatre offers a program leading to the degree of Master of Education in Secondary Education with a concentration in speech and theatre. This program is designed primarily for teachers and future teachers of speech and theatre. In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program and approved by his adviser.

Speech and Theatre courses also may be taken in partial fulfillment of the creative arts concentration for the degree of Master of Education in Secondary Education with a concentration in creative arts. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** course is a prerequisite for all graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

ST 200 Oral Communication U***3 credits***

Examination of the practical and theoretical aspects of listening, conversation, discussion, interviewing, and public speaking.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

ST 290 Speech Improvement in the Classroom I UG***3 credits***

An introduction to the problems of normal language and speech development in children. A study of the most common functional and organic communication disorders, with emphasis placed on identification and treatment of these problems in the classroom situation. Lectures, reading, research. Prerequisite: ST 200 or permission of the Instructor.

ST 291 Phonetics UG 3 credits

The primary emphasis of this course will be upon the study of the international Phonetic Alphabet, and its application to the sounds of the language. The factors of articulation, enunciation, and pronunciation will be noted along with drill work in connection with the sounds of acceptable speech. Further, stress will be placed upon an understanding of the vowels and consonants and upon modes of sound production. Prerequisite: ST 200.

ST 310 Oral Interpretation UG 3 credits

This course will offer opportunity for the study and practice of various styles of presentation in the oral interpretation of prose and poetry. A detailed evaluation and analysis of that material which is suitable for preparation and delivery to the class will be made. This course is especially recommended for those students with a definite interest in literature and humanities. Prerequisite: ST 200.

ST 330 Creative Dramatics UG 3 credits

Training and methodology in developing the child's creative faculties through the use of pantomime, dramatic play, role playing, and other techniques. Students will participate in classroom exercises, and work in laboratory sessions with children in order to put into practice the concepts of preparation and evaluation learned through class discussion and lecture. Prerequisite: ST 200 or permission of the Instructor .

ST 360 Group Discussions UG 3 credits

Principles of interpersonal communication in group situations with stress on participation, leadership and reasoning. Prerequisite: ST 200.

ST 370 Play Production UG 3 credits

This course is designed to treat the various aspects of school play production, ranging from classroom to all-school presentations on the elementary or high school level. It deals with such problems as selecting a play, casting, directing, lighting, costuming and designing, and building scenery. Practical work in the above activities will be required of all students.

ST 380 Stagecraft UG 3 credits

This course will offer the opportunity for the study of the principles of stagecraft. Students will also receive practical experience in the design, construction, painting, rigging and handling of stage scenery. In addition, lighting the stage and prop construction will be studied to a limited degree. Practical work in all areas will be required on a laboratory basis. Prerequisite: ST 370.

ST 390 Principles of Acting UG 3 credits

To develop an appreciation of and skill in the fundamentals of acting. Classroom exercises, improvisations, and scenes are aimed at providing the beginner with a basic technique which can be applied to the creation of any role. Prerequisite: ST 370

ST 395 Principles of Directing UG 3 credits

To provide the basic knowledge and techniques the beginning director will need in order to interpret a play to an audience. Among the areas covered are play analysis, composition, movement, characterization, and rehearsal techniques. Prerequisite: ST 370.

ST 400 Creative Oral Techniques for Teaching UG 3 credits

In the advanced course the student is helped to assume leadership responsibilities in the development of both meaning and form in logical and creative modes of oral communication. The students learn to use the more complex areas of oral communication, i.e., role-playing, creative dramatics, story telling, interpretive reading and choral speaking to help him develop the total communicative process. Prerequisite: ST 200.

ST 410 Voice and Diction UG 3 credits

Analysis of each student's habits of respiration, phonation, and articulation; exercises designed to correct poor habits. Physics and physiology of the vocal mechanism. Training in perception, differentiation, and production of the standard sounds of good American speech. Prerequisite: ST 200 or permission of the Instructor.

ST 420 Children's Theatre UG 3 credits

This course is designed as a survey of the history and objectives of theatre for the child audience. It examines some of the special techniques of acting, directing, and producing plays for children. Attention is given to play selection and adaptation of children's literature for dramatic presentation. Students will direct scenes or "Cuttings" as part of their class work. Prerequisite: ST 370.

ST 430 Theatre History UG 3 credits

Trends in dramatic and theatrical developments throughout the world, from Greece to contemporary drama.

ST 460 Discussion and Debate UG 3 credits

Through frequent practice and intensive study the student is trained in the principles and methods of communication as they apply to the group situation. The functional aspects of group membership, discussion, debate, logic, and leadership will be given particular attention. Prerequisite: ST 200.

ST 490 Speech Anatomy and Physiology UG 3 credits

Anatomy and physiology of speech and hearing mechanism. Background factors of speech disorders. Prerequisite: permission of the Instructor.

ST 493 Speech Reading and Auditory Training 3 credits

Habilitative and rehabilitative procedures for the deaf and hard of hearing with emphasis on auditory training, speech reading and speech conservation. Prerequisite: ST 410 or consent of the Instructor.

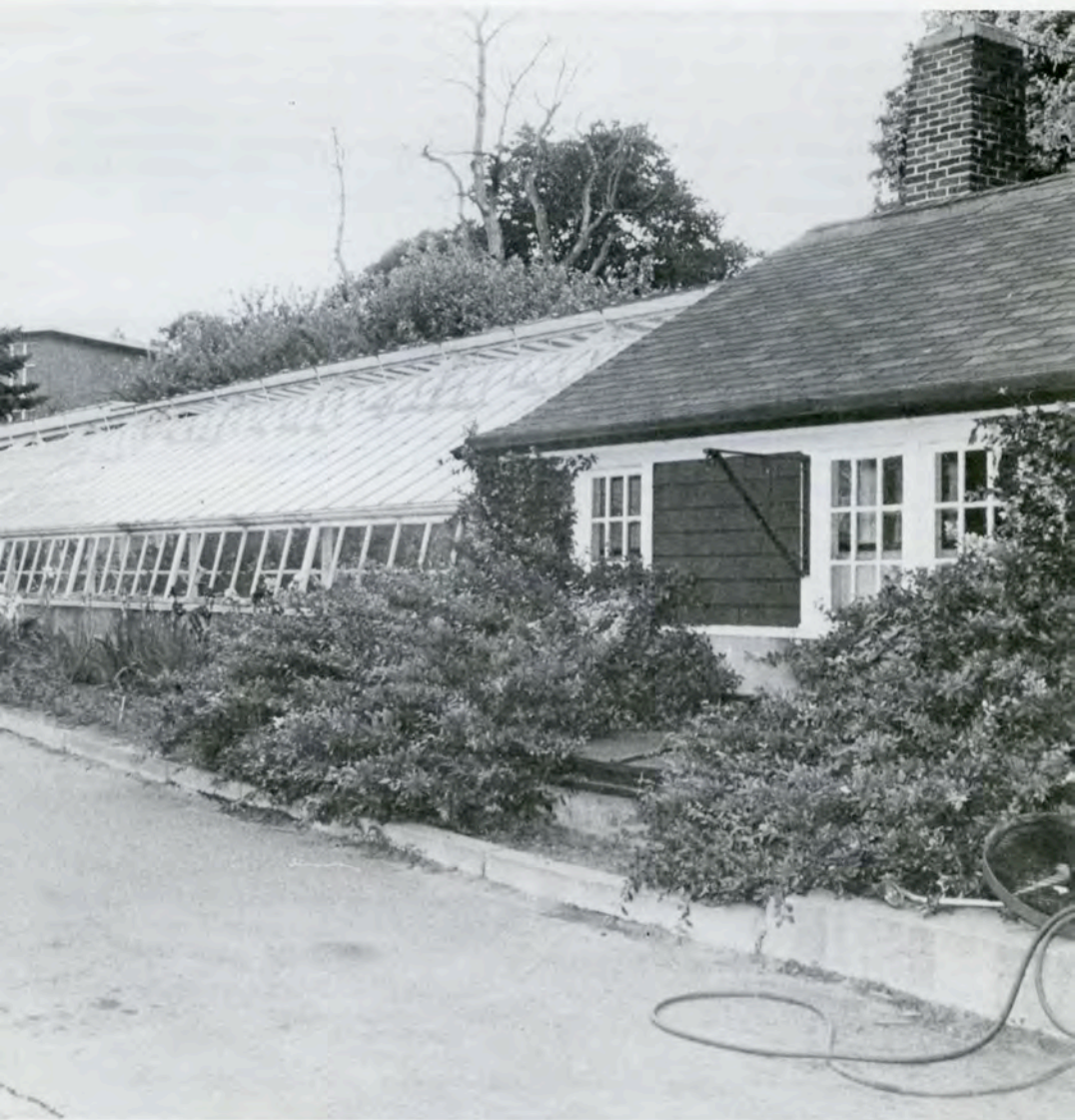
ST 502 Research G credit to be arranged

Original research undertaken by an individual in the field of speech and theatre. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

ST 503 Directed Study G credit to be arranged

Directed study in the field of speech and theatre. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll

in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.



DIVISION OF THE HUMANITIES

DIRECTOR: PROFESSOR BOYLE

English

Foreign Language

Philosophy

Master of Arts

The Division of the Humanities offers a program leading to the degree of Master of Arts in Humanities, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in one of the disciplines within the scope of the humanities is normally required for admission to this program. In addition to meeting general degree requirements, the student must complete courses appropriate to his degree program. The interdisciplinary program in humanities allows for flexibility in the student's choice of subjects. All courses must be approved by the adviser. Applicants must have an interview with the Director of the Division.

Master of Education

The Division of the Humanities also offers a program leading to the degree of Master of Education in Secondary Education with a concentration in humanities. This program is designed for teachers and future teachers of humanities. In addition to meeting general degree requirements, the student must complete the concentration requirement by electing courses appropriate to his degree program. The interdisciplinary program in humanities allows for flexibility in the student's choice of subjects. All courses must be approved by the adviser.

DEPARTMENT OF ENGLISH

Chairman: Professor Ridlon

Professors: Chellis, DeRocco, Sheinfeld

Associate Professors: Guerin, Jarvis, Joki, McGinnis, Yokelson

Assistant Professors: Anderson, Apstein, DeLisle, Johnson, Keener, Nerney, Smith, To-back, Wood

Instructors: Angell, Fanning, Porter, Poule, Stanton, Vadeboncouer

Master of Arts

The Department of English offers a program leading to the Master of Arts in English. An undergraduate major in English, with at least twenty-four hours of above average work in the discipline, is normally required for admission to this program.

In addition to meeting general degree requirements, the student must complete courses appropriate to his degree program, including the course called "Theory and Discipline of Literature."

Applicants must have an interview with the Chairman of the Department. No application will be considered unless this requirement has been met.

Master of Education

The Department of English offers a program leading to the degree of Master of Education in Secondary Education with a concentration in English. The program is designed primarily for teachers and future teachers of English. It also prepares students for further graduate work in English.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

HU 201 Comparative Religion UG 3 credits

An examination of the origins, development, and basic tenets of the major world religions from earliest times to the Moslem era, with particular emphasis on ancient Near Eastern religions, Judaism, Christianity, and Islam. Prerequisite: permission of the Instructor.

HU 251 Religion in Contemporary America G 3 credits

The course will consider the organization, practices, and beliefs of current American religious organizations set in their historical and cultural perspectives. Roman Catholic, Eastern Orthodox, Jewish, and Protestant denominations will be included in the study. The role of the church in the modern American community will be assessed and recent trends within and without the church will be discussed. The study will include such recent theological topics as Honest-to-God, God Is Dead, the Theology of Hope, the Secular City, and the so-called Jesus movement. Prerequisite: permission of the Instructor.

EN 200 Advanced Composition UG 3 credits

Expository writing is taught through frequent practice, analysis of models, and criticism by instructor and students. Opportunity is available for the student to develop his writing in any specific area he chooses, but emphasis will be on satire, argument, critical analysis, exposition, and description. Some attention will be given to the major developments in English prose style since 1600. Prerequisite: EN 101-102.

EN 201 Writing and the Teaching of Writing UG 3 credits

Writing, criticism, creativity. Student participation in criticism as a learning device and as a means to a reasonable load for the teacher. Objective is to improve the student's writing skill by the same techniques he can use in teaching the skill. Prerequisite: EN 101-102.

EN 211, 212 Literary Classics of Western Civilization**UG****3 credits each**

Through classic examples of epic, myth, sacred history, parable, allegory, tragic and comic drama, philosophical dialogue, satire, lyric, and novel, the student will be introduced to the principal literary forms through which great writers, from ancient times to the twentieth century, have contributed to the religious, intellectual, moral, and esthetic traditions of Western culture. Prerequisite: EN 101-102.

EN 215 Comparative Drama UG**3 credits**

A study of plays of different periods dealing with the same mythological or historical themes. Included will be plays on the Oedipus theme, from Sophocles to Cocteau; plays about the House of Atreus, from Aeschylus to Sartre; plays about Antony and Cleopatra, from Shakespeare to Shaw; and plays about Joan of Arc, from Schiller to Anouilh. The larger purpose of the course will be to explore the freedom within limits of an artist who chooses to work with established plot materials. Prerequisite: EN 101-102.

EN 221, 222 Major English Writers UG**3 credits each**

Representative works by the major English writers will be studied both formally and historically to develop an understanding of the genres, styles, and themes which characterize English imaginative and critical writing. The first semester will examine works from the Anglo-Saxon period to the eighteenth century; the second, works of the nineteenth and twentieth centuries. Prerequisite: EN 101-102.

EN 225 The Theme of Love UG**3 credits**

Various literary treatments of the theme of love will be approached through such works as the following: Chaucer, Troilus and Criseyde; Donne, Poetry; Shakespeare, Romeo and Juliet, Antony and Cleopatra; Dryden, All for Love; Byron, Don Juan, Cantos I-IV; Bronte, Wuthering Heights; Browning, Poems; Henry James, The American or The Portrait of a Lady; Lawrence, Sons and Lovers; Hemingway, A Farewell to Arms. Prerequisite: EN 101-102.

EN 230 Creative Writing UG**3 credits**

Fiction, non-fiction, verse, drama or any experimental forms may be undertaken by the student. Class discussions will center on the examination of both professional and student efforts. Frequent conferences will be held with individual students. Prerequisite: EN 101-102.

EN 231, 232 Major American Writers UG**3 credits each**

Survey of American Literature from the Colonial beginnings to the present. Writers such as Franklin, Edwards, Irving, Poe, Hawthorne, Emerson, Whitman, Dickinson, Twain, James, Frost, Eliot, Faulkner, and Hemingway will be studied in their social and cultural contexts. Prerequisite: EN 101-102.

EN 235 The Short Novel UG**3 credits**

Works selected from such writers as Conrad, James, Faulkner, Mann, Kafka, and Dostoevsky. Prerequisite: permission of the Instructor.

EN 241, 242 Shakespeare UG**3 credits**

Introduction to Shakespeare's plays set against the background of the times. Representative selections from the tragedies, comedies, and histories will be studied in detail. Prerequisite: EN 101-102.

EN 260 Literature of the Continental Renaissance UG 3 credits

Selected works of Petrarch, Boccaccio, Machiavelli, Erasmus, Castiglione, Rabelais, Cellini, Montaigne, Cervantes, and Ronsard representing prevailing literary themes and techniques. Lectures and discussions on the art, history, philosophy, and music of the age will be offered by faculty in these disciplines. Prerequisite: EN 101-102.

EN 280 Journalism UG 3 credits

To develop skills in copyediting and proofreading with special emphasis given to objective news story writing. Some attention will be given to dramatic criticism and sports writing. The workshop approach will be used. Prerequisite: EN 101-102.

EN 290 Realism and Naturalism in American Literature UG 3 credits

Studies in the fiction of Howells, James, Stephen Crane, Frank Norris, Theodore Dreiser, and in the twentieth-century extensions of realism in the novels of writers such as Sinclair Lewis, Sherwood Anderson, Dos Passos and Farrell. Attention will also be paid to the proselytizing criticism of the first generation of realists, notably James's Prefaces and Howells' essays. Prerequisite: EN 101-102.

EN 300 The History and Structure of the English Language UG 3 credits

Changes in the structure of the English language from Anglo-Saxon to modern English will be studied with attention to pertinent historical background. There will be an introductory study of structural linguistics and generative grammar. Prerequisite: EN 101-102.

EN 305 History of the English Language UG 3 credits

Origins and development of English. Selected readings in Old and Middle English. Prerequisite: permission of the Instructor.

EN 311 The Negro in U.S. Literature UG 3 credits

Autobiographies and fiction beginning chronologically with *The Life of Frederick Douglass*, with particular attention paid to *Uncle Tom's Cabin*, *Native Son*, and *Invisible Man*. Prerequisite: EN 231 or EN 331 or permission of the Instructor.

EN 312, 313 Studies in Modern British Fiction UG 2 credits for each quarter

Readings in selected twentieth-century British novelists. First quarter: E. M. Forster and D. H. Lawrence. Second quarter: James Joyce and Graham Greene. Prerequisite: EN 222 or permission of the Instructor.

EN 314 Medieval English Literature UG 2 credits for each quarter

Selected readings in non-Chaucerian writing: Langland, Gower, romance, lyrics, drama. Four periods weekly each quarter. Prerequisite: EN 211 or EN 221 or permission of the Instructor.

EN 320 Chaucer UG 3 credits

Troilus and Criseyde and selected readings from the *Canterbury Tales*. Prerequisite: EN 222 or permission of the Instructor.

EN 322 The Age of Pope UG 3 credits

The literature of the neo-classical period, with emphasis on the works of Pope, Swift, Gay, Addison and Steele. Prerequisite: EN 101-102.

- EN 323 Linguistics UG** **3 credits**
The generative-transformational theory of syntactic structures as applied to the English language. Selected readings on various aspects of linguistics. Prerequisite: EN 101-102.
- EN 330 Modern American Fiction UG** **3 credits**
Selected readings in Fitzgerald, Hemingway, and Faulkner. Prerequisite: EN 232 or permission of the Instructor.
- EN 331 U.S. Literature in the Nineteenth Century UG** **3 credits**
Selected readings in C. G. Grown, Cooper, Hawthorne, Poe, Emerson, Thoreau, Whitman, and Dickinson. Prerequisite: EN 101-102.
- EN 332 U.S. Literature in the Nineteenth Century UG** **3 credits**
The novels and tales of Melville, Twain, Hawthorne, and James. Prerequisite: EN 231 or EN 331.
- EN 335 Elizabethan and Jacobean Drama UG** **3 credits**
Reading and discussion of a number of plays with attention to contemporary social developments as well as to the historical development of the English Play. Prerequisite: EN 101-102.
- EN 338 The Short Story UG** **3 credits**
The primary focus in The Short Story will be on the examination of the relationship between form and content in several British, American and continental short stories. A secondary concern will center on the historical development of the genre. Prerequisite: EN 101-102.
- EN 340 Literature of the English Renaissance UG** **3 credits**
The non-dramatic literature of the Age of Shakespeare will include the reading of works by such writers as Sidney, Spenser, Nashe, Marlowe, and Drayton. Although the emphasis will be on textual analysis, the historical, social, and cultural background to the period will also be examined. Prerequisite: EN 101-102.
- EN 346 Southern Literature UG** **3 credits**
Beginning with the Fugitives in the 1930's (Robert Penn Warren, Allen Tate, John Crowe Ransom, and Donald Davidson primarily) and their concern with the problem of the Southern writer's coming to grips with his identity as both a southerner and an artist, the focus will center on the writings of such contemporary figures as William Faulkner, Tennessee Williams, Katherine Anne Porter, Flannery O'Connor, Carson McCullers, Eudora Welty, and Peter Taylor. Prerequisite: EN 101-102.
- EN 350 The Modern English Novel UG** **3 credits**
A selective survey of major contributors to the English novel from Joseph Conrad through the school of the "Angry Young Men." Major attention will be given to the analysis of specific texts. Prerequisite: EN 101-102.
- EN 353, 354 Modern Drama UG** **3 credits each**
The main forces in Modern European drama, starting with Ibsen. Prerequisite: EN 101-102.
- EN 356 Modern American Drama UG** **3 credits**
Selected plays of dramatists from O'Neill to Albee. Prerequisite: EN 101-102.

EN 360, 361 The English Novel UG**3 credits each**

The development of the English novel, including the works of Defoe, Richardson, Fielding, Smollett, Sterne, Austin, and Scott in the first semester, and Dickens, the Brontës, Thackeray, Eliot, Trollope, Conrad, and Hardy in the second semester. Prerequisite: EN 101-102.

EN 365 Victorian Prose and Poetry UG**3 credits**

The major emphasis will be placed upon the poetry of Tennyson, Browning, and Arnold, but the works of other 19th century poets such as Hopkins and Hardy will also be read and discussed. The essays of Carlyle, Arnold, Newman, Huxley, and others will also be studied. Prerequisite: EN 101-102.

EN 366 Tennyson, Arnold, Browning UG**3 credits**

These major nineteenth-century authors will be studied in some detail, with particular reference to the historical, social, and cultural milieu within which they wrote. Prerequisite: EN 101-102.

EN 337 English Literature of the 1890's UG**3 credits**

The minor writers of the late nineteenth century will be examined from an esthetic, social, and intellectual point of view. Prerequisite: EN 101-102.

EN 380 Milton UG**3 credits**

Emphasis will be placed on the main poetical works of Milton: *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*. However, certain of the minor poetic works, as well as selected prose will be read also. Prerequisite: permission of the Instructor.

EN 383 Modern Irish Literature UG**3 credits**

Includes Irish writing from 1890 to the present, with special emphasis on the works of Yeats, Synge, O'Casey, Joyce, O'Connor, and O'Faolain. Prerequisite: EN 101-102.

EN 386 English Romantic Poets UG**3 credits**

The chief works of Wordsworth, Coleridge, Byron, Shelley, and Keats will be studied. Emphasis will be placed on textual analysis, but consideration will be given to historical background and to developments in philosophy and esthetic theory which have a direct bearing on Romantic poetry. Prerequisite: EN 101-102.

EN 387 Indo-Anglian Literature UG**3 credits**

This course will deal with literature written in English by Indian writers. The emphasis will be on fiction, particularly the novels and short stories dealing with the conflict between old and new in Indian national life. Prerequisite: EN 101-102.

EN 390 Literary Criticism UG**3 credits**

The history of literary criticism from Aristotle to the present. Emphasis will be placed, however, on those persistent esthetic, psychological, social, and cultural patterns which have helped shape the literature of our own age. Prerequisite: EN 101-102.

EN 391 Modern Literary Criticism UG 3 credits

Several twentieth-century critical approaches to literary analysis, interpretation, and evaluation. Particular attention will be given to literary concepts derived from psychoanalysis, sociology, anthropology, semantics, philosophy, and theology. Such topics as existentialist criticism, the "new criticism," and the theory of myth and symbol will be considered. Prerequisite: EN 101-102.

EN 392 Modern Poetry UG 3 credits

The major British and American poets of the 20th century with particular emphasis on the works of Hopkins, Yeats, Robinson, Eliot, Auden, and Thomas. Prerequisite: EN 101-102.

EN 393 Modern British Poetry UG 3 credits

The major British poets of the twentieth century with particular emphasis on the works of Hopkins, Yeats, Eliot and Thomas. Prerequisite: EN 101-102.

EN 394 Modern American Poetry UG 3 credits

The major American poets of the twentieth century with particular emphasis on the works of Robinson, Frost, Williams and Stevens. Prerequisite: EN 101-102.

EN 395 Eighteenth Century Literature UG 3 credits

The writings of several major literary figures, such as Swift, Boswell, Johnson, Defoe, Fielding, and Richardson. Prerequisite: EN 101-102.

EN 400 Techniques of Literary Research UG 3 credits

Research procedures, with special reference to the materials and methods of literary study and publication. Various critical approaches to literature will be examined, and some evaluation of scholarly procedure will be made. Prerequisite: EN 101-102.

EN 495 Seminar in English Literature UG 3 credits

This seminar, limited to seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in English literature, the topic changing from year to year. Prerequisite: EN 101-102.

EN 496 Seminar in American Literature UG 3 credits

This seminar, limited to seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in American literature, the topic changing from year to year. Prerequisite: EN 101-102.

EN 497 Seminar in World Literature UG 3 credits

This seminar, limited to seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in world literature, the topic changing from year to year. Prerequisite: EN 101-102.

EN 500 Theory and Discipline of English G 3 credits

This course, normally open only to graduate students, will examine the backgrounds to, and the techniques of scholarship, in the field of literature. Some acquaintance with critical approaches to literature, as well as comprehensive experience in the major genres and periods of English and American literature, will be assumed. Prerequisite: EN 101-102.

EN 502 Research G*credit to be arranged*

Original research undertaken by an individual in the field of English. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 9 credits for an M.A. and 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

EN 503 Directed Study G*credit to be arranged*

Directed study in the field of English. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 6 credits for an M.A. and 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF MODERN FOREIGN LANGUAGES

Chairman: Associate Professor Arruda

Associate Professors: Briggs, Giannini, Judah

Assistant Professors: Cotugno, Dawley, George, Padula, Reordan, Shapiro, Tijerina

Instructors: Desautels, Lucas

The Department of Modern Foreign Languages offers a program leading to the degree of Master of Education in Secondary Education with a concentration in modern foreign languages. This program is designed primarily for teachers and future teachers of foreign languages. It also prepares students for further graduate work in foreign languages. In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program and approved by his adviser. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

French

LF 101, 102 Elementary French U*3 credits for each semester*

An introduction to written and spoken French. Limited to those students with no previous study of the French language. Four periods weekly.

LF 151, 152 Intermediate French U *3 credits for each semester*

A rapid review of French grammar with stress on essential grammatical points and the development of reading ability. Prerequisite: LF 102.

German**LG 101, 102 Elementary German U** *3 credits for each semester*

An introduction to the study of the German language. Emphasis on correct pronunciation and basic grammar. Four periods weekly.

LG 151, 152 Intermediate German U *3 credits for each semester*

A systematic review of basic German grammar. Graded reading selections and an introduction to aspects of German culture. Prerequisite: LG 102.

Portuguese**LP 101, 102 Elementary Portuguese U** *3 credits for each semester*

An introduction to the basic skills of reading and writing, and the development of aural comprehension and correct oral pronunciation. Four periods weekly.

LP 151, 152 Intermediate Portuguese U *3 credits for each semester*

A review of basic grammar and pronunciation and a more advanced study of these two aspects of the language. Reading, writing, and oral proficiency will be stressed. Prerequisite: LP 102.

Russian**LR 101, 102 Elementary Russian U** *3 credits for each semester*

Simultaneous development of the four fundamental language skills. Classwork supplemented by laboratory drills. Four periods weekly.

LR 151, 152 Intermediate Russian U *3 credits for each semester*

Consolidation of elementary Russian through review of basic elements, plus written and oral self-expression based on detailed readings of selected texts. Prerequisite: LR 102.

Italian**LT 101, 102 Elementary Italian U** *3 credits for each semester*

An aural-oral approach to the grammar of the Italian language. Emphasis is on the mastery of correct pronunciation and of fundamental grammatical points to ensure a basic oral, reading, and written command of the language. Four periods weekly.

LT 151, 152 Intermediate Italian U *3 credits for each semester*

A continuation of Elementary Italian, with stress on essential grammatical features, oral work, and reading and writing development in the language. Prerequisite: LT 102.

Spanish**LS 101, 102 Elementary Spanish U** *3 credits for each semester*

An introduction to the essentials of Spanish pronunciation and grammar. Reading, writing, aural and oral proficiency will be stressed. Four periods weekly.

LS 151, 152 Intermediate Spanish U *3 credits for each semester*

A review of basic grammar and correct pronunciation to further an audio-oral command of the language. Aspects of Hispanic culture will be introduced. Prerequisite: LS 102.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

French**LF 181, 182 Advanced French UG** *3 credits each*

A concentration on more advanced aspects of the spoken and written French language. Oral practice through individual classroom participation. Prerequisite: LF 152 or its equivalent.

LF 201 French Literature of the Middle Ages UG *3 credits*

A survey of representative works of the Middle Ages in modern French translation. Prerequisite: LF 181, 182, or its equivalent.

LF 252 Sixteenth Century French Literature UG *3 credits*

A study of the poetry, prose, and theatre of the sixteenth century, noting the transition from the late Middle Ages through the Renaissance. Prerequisite: LF 201, or its equivalent.

LF 281 French Conversation and Civilization UG *3 credits*

Improvement of oral expression and pronunciation. Assigned topics on aspects of French Civilization to build vocabulary and to apply structures learned. Prerequisite: LF 181, 182, or its equivalent.

LF 301 17th Century French Literature UG *3 credits*

The principal historical events and representative authors and genres of France of the seventeenth century will be studied with the object of understanding Classicism as a literary movement. Prerequisite: LF 201, and 252, or their equivalent.

LF 352 18th Century French Literature UG *3 credits*

The literary contributions of the Enlightenment and Encyclopedists to the French Revolution and pre-Romanticism. Prerequisite: LF 301, or permission of the Instructor.

LF 372 Advanced French Composition and Grammar UG *3 credits*

A thorough study of French grammar to develop a written command of the French language. Prerequisite: LF 181, 182, or its equivalent.

LF 381 Applied French Linguistics and Phonetics UG *3 credits*

A linguistic approach to the sounds of the French language with emphasis on a mastery of the elements of correct standard pronunciation. Prerequisite: LF 181, 182, or its equivalent.

LF 401 19th Century French Literature UG 3 credits

Through representative works, the entire 19th century will be surveyed with special emphasis on principal literary movements: Romanticism, Realism, and Symbolism. Prerequisite: LF 201, 252, 301, 352, or their equivalent.

LF 451 20th Century French Literature UG 3 credits

Literary trends will be discussed and typical works of well known authors will be read for class work and individual reports. Barres, France, Gide, Proust, Claudel, Romains, Sartre, Camus. Prerequisite: LF 201, 252, 301, 352, or their equivalent.

German**LG 191, 192 Scientific German UG 3 credits each**

An introduction to the reading and translating of scientific material. Open to science majors as a substitution for LG 151, 152. Prerequisite: LG 102, or its equivalent.

LG 181, 182 Advanced German UG 3 credits each

Introduction to a more advanced level of the literature. Representative German authors will be read and discussed. Prerequisite: LG 151, 152, or its equivalent.

LG 201, 202 Survey of German Literature UG 3 credits each

German literature from its earliest beginnings to the present day. Representative works of the principal literary periods will be read and discussed. Prerequisite: LG 181, 182, or its equivalent.

LG 282 German Conversation and Civilization UG 3 credits

Designed to develop further the student's command of spoken German. Discussion topics will center upon aspects of German civilization and culture. Prerequisite: LG 181, 182, or its equivalent.

LG 301, 302 Modern German Literature UG 3 credits each

Principal works and authors of contemporary German literature. Prerequisite: LG 201, 202, or its equivalent.

LG 351 German Romanticism UG 3 credits

Pertinent authors and their representative works. Romanticism as a literary movement. Prerequisite: LG 201, 202, or its equivalent.

LG 382 Medieval German Literature UG 3 credits

The beginnings of German literature through principal works of the period. Prerequisite: LG 201, 202, or its equivalent.

LG 401 The Age of Goethe and Schiller UG 3 credits

The Storm and Stress Period and Classical Period of German literature, with a focus upon Goethe and Schiller as the leading representatives of these movements. Prerequisite: LG 201, 202, or its equivalent.

LG 451 German Drama, Prose and Poetry of the 19th Century UG 3 credits

Representative writers of the century will be read and discussed, with particular emphasis upon Grillparzer, Kleist, Keller and Storm. Prerequisite: LG 201, 202, or its equivalent.

Portuguese

LP 181, 182 Advanced Portuguese UG *3 credits each*

Stress on improvement of compositional and aural-oral skills. Literary texts from Brazilian and Portuguese literatures. Prerequisite: LP 151, 152, or its equivalent.

Russian

LR 181, 182 Advanced Russian UG *3 credits each*

Progressive development of the student's language proficiency through reading of scientific and literary texts, oral practice and written compositions. Prerequisite: LR 151, 152, or its equivalent.

Italian

LT 181, 182 Advanced Italian UG *3 credits each*

A review of basic Italian grammar and presentation of more advanced structural elements. Stress on improvement of compositional and aural-oral skills. Varied cultural reading selections. Prerequisite: LT 151, 152, or its equivalent.

Spanish

LS 181, 182 Advanced Spanish UG *3 credits each*

A more detailed study of Spanish grammar. Vocabulary development, correct pronunciation, and improved audio-oral skills. Cultural readings from Hispanic world. Prerequisite: LS 151, 152, or its equivalent.

LS 201, 202 Survey of Spanish Literature UG *3 credits each*

Major literary movements, works and authors of peninsular Spanish literature from earliest times to the present. Prerequisite: LS 181, 182, or its equivalent.

LS 251, 252 Survey of Spanish-American Literature UG *3 credits each*

A representative study of the literature of the Colonial period, the Independence period, the eighteenth century Modernism, and the Contemporary period. Prerequisite: LS 181, 182, or its equivalent.

LS 281 Spanish Conversation and Phonetics UG *3 credits*

Improvement of oral proficiency by a systematic study of the sounds of correct pronunciation. Prerequisite: LS 181, 182, or its equivalent.

LS 282 Spanish Composition and Civilization UG *3 credits*

An introduction to the history, geography, social institutions, and culture of Spain. Prerequisite: LS 181, 182, or its equivalent.

LS 301 The Golden Age of Spanish Literature UG *3 credits*

A study of the poetry, prose and theatre from the second half of the sixteenth century to the Baroque period. Emphasis will be on the mystics, Gongora, Lope de Vega, Calderon, and Quevedo. Prerequisite: LS 201, 202, or its equivalent.

LS 352 Cervantes UG *3 credits*

A study of the man and his works, with special emphasis on "Don Quixote." Prerequisite: LS 201, 202, or its equivalent.

LS 381 The Middle Ages UG 3 credits

The evolution of Spanish literature through the first half of the 16th Century: Romances, Poema del Cid, La Celestina, Lazarillo de Tormes, El libro de Buen Amor. Prerequisite: LS 291, 202, or its equivalent.

LS 401 19th Century Spanish Literature UG 3 credits

The Romantic and Realist Movements. Representative work of the novel, poetry, and drama. Caballero, Alarcón, Galdós, Clarín, Bazán, Ibáñez, Duque de Rivas, Gutiérrez, Espronceda, Larra. Prerequisite: LS 201, 202, or its equivalent.

LS 451 20th Century Spanish Literature UG 3 credits

The Spanish novel, essay, poetry and drama from the Generation of '98 to the present. Unamuno, Baroja, Azorín, Machado, Jiménez, Lorca, Casona, Cela. Prerequisite: LS 201, 202, or its equivalent.

FL 502 Research G *credit to be arranged*

Original research undertaken by an individual in the field of modern foreign languages. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

FL 503 Directed Study G *credit to be arranged*

Directed study in the field of modern foreign languages. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF PHILOSOPHY

Chairman: Assistant Professor Cheney

Associate Professors: Corkery, Joyal

Assistant Professor: Sanders

The Department of Philosophy does not offer a program at the master's degree level at this time. Philosophy courses may be taken in partial fulfillment of the humanities concentration for the degree of Master of Education in Secondary Education with a concentration in humanities. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted

toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

PL 400 Comparative Religions UG *3 credits*
This course is designed to introduce to students the tenets of the major religions. Prerequisite: permission of the Instructor.

PL 401 Philosophy of Natural Science UG *3 credits*
Inquiry into the conceptual foundations of natural science, including topics of induction, causation and determinism, natural law, theoretical explanation, and concept formation. Prerequisite: completion of two philosophy courses or permission of the Instructor.

PL 403 Philosophy and the Arts UG *3 credits*
Inquiry into recurrent philosophical themes in literature and the fine arts, accompanied by an introduction to the fundamental problems of aesthetics. Prerequisite: completion of two philosophy courses or permission of the Instructor.

PL 410 Existentialism UG *3 credits*
A critical study of the existentialist movement in philosophy, concentrating on the concepts of human existence, anxiety, freedom decision, introduction to phenomenology. Reading from Kierkegaard, Heidegger, Sartre, Jaspers, Camus. Prerequisite: completion of two philosophy courses or permission of the Instructor.

PL 450 Philosophy Seminar UG *3 credits*
Study of a particular philosopher and/or selected philosophical problems. Topics vary, course may be repeated. Limited enrollment, admission only by consent of Instructor.

PL 502 Research G *credit to be arranged*
Original research undertaken by an individual in the field of philosophy. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

PL 503 Directed Study G *credit to be arranged*
Directed study in the field of philosophy. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DIVISION OF NATURAL SCIENCES AND MATHEMATICS

DIRECTOR: DEAN HILFERTY

Biological Sciences

Chemical Sciences
Mathematics

Earth Sciences & Geography
Physics

DEPARTMENT OF BIOLOGICAL SCIENCES

Chairman: Professor Howe

Commonwealth Professor: Hilferty

Professors: Brennan, Cirino, Mish, Morin, Wall

Associate Professor: Hewitson

Assistant Professors: Jahoda, Muckenthaler, Schaefer

Master of Arts

The Department of Biological Sciences offers a program leading to the degree of Master of Arts in Biology, which is designed to prepare qualified students for research, further graduate study and teaching. An undergraduate major in biology, or its equivalent, is normally required for admission to this program. The student should have satisfactorily completed at least one semester of general botany and one semester of general zoology (or credits in a general biology course) as well as at least two semesters of calculus, organic chemistry and general physics.

In addition to meeting general degree requirements the student must complete courses appropriate to his degree program.

Master of Education

The Department also offers a program leading to the degree of Master of Education in Secondary Education with a concentration in biology. This program is designed for teachers and future teachers of biology. It also prepares students for further graduate work in biology.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following undergraduate courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

BI 101 Introduction to the Biological Sciences I **(General Botany) U**

3 credits

The botanical aspects of biology with emphasis on the structure and function of cells, tissues, organs, and the plant body; together with a general survey of the plant kingdom. Such topics as photosynthesis, water relations, respiration, growth,

reproduction, heredity, disease, and evolution are included. BI 101-102 are coordinated so that concepts common to plants and animals are taught in one semester or the other and not duplicated. Students are expected to complete both semesters.

BI 102 Introduction to the Biological Sciences II

(General Zoology) U

3 credits

The zoological aspects of biology with emphasis on such topics as: the nature of science and scientific thinking; the structure and physiology of cells, tissues, organs, and organ-systems; embryogeny; heredity; ecological and phylogenetic interrelationships; and a general survey of the animal kingdom. BI 101-102 are coordinated so that various concepts common to plants and animals are taught in one semester or the other and not duplicated. Students are expected to complete both semesters. BI 102 may be taken before BI 101.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

BI 281 Invertebrate Zoology UG

3 credits

The biology of invertebrates from a phylogenetic standpoint with emphasis on: taxonomy, morphology, histology, physiology, development, and natural history. Representatives of the principal classes of each phylum are studied. Prerequisite: BI 101-102 or permission of the Instructor.

BI 282 Comparative Chordate Anatomy UG

3 credits

An ontogenetic and phylogenetic survey is made of chordate gross anatomy, supplemented by laboratory dissections of representative species. Emphasis is placed on ecomorphology and the changes in chordate structure and biology that comprise their evolution, with an analysis of the significance of these changes in light of our modern knowledge of evolution. Prerequisite: BI 101-102 or permission of the Instructor.

BI 283 Field Natural History UG

3 credits

The identification of local plants and animals with emphasis on the natural history of common animals, dominant biotic communities of Southeastern Massachusetts, general morphology and taxonomy of organisms, and techniques of collecting and preserving. Prerequisite: BI 101-102 or permission of the Instructor.

BI 292 Plant Anatomy UG

3 credits

A comparative study of the structural, functional, developmental and phylogenetic characteristics of cells, tissues, and organs in the vascular plants with emphasis on the angiosperms. Prerequisite: BI 101-102 or permission of the Instructor.

BI 294 Plant Morphology UG

3 credits

A survey of the plant kingdom from the Monera through the Angiosperms with emphasis on evolutionary adaptations associated with each group and phylogenetic relationships between the divisions as reflected in present day classification systems. Prerequisite: BI 101-102 or consent of the Instructor.

BI 300 Biochemistry UG 3 credits

A study is made of the functions, chemical transformations, and attendant energy changes associated with basic biological phenomena. Prerequisites: BI 101-102, CH 131-132, and MA 103-104, or permission of the Instructor.

BI 312 Heredity and Human Endeavor UG 3 credits

The principles of genetics which are important to an understanding of the hereditary mechanism in man. Individual differences in relation to gene-environment interaction and the role of heredity in education, governance, and society. Primarily an elective course for non-science majors. Prerequisite: BI 101-102 or permission of the Instructor.

BI 381 General and Comparative Physiology UG 3 credits

Physiological principles concerned in irritability, contraction, circulation, gas exchange, excretion, and hormonal regulation. Prerequisites: BI 101-102, CH 131-132, PH 181-182, MA 103-104, or permission of the Instructor.

BI 385 Mammalian Physiology UG 3 credits

General physiological principles and their application to the human body. Prerequisite: BI 101-102, or permission of the Instructor.

BI 393 Genetics UG 3 credits

Analysis of the basic principles underlying heredity and the mechanisms involved in the replication, recombination, mutation, variation, and expression of genetic material in representative plant, animal, and microbial systems. Two lectures and one two-hour laboratory period weekly. Prerequisites: BI 101-102, MA 103-104, or permission of the Instructor.

BI 395 Microbiology UG 3 credits

An introduction to the structure, function, and ecology of microorganisms with emphasis on bacteria and viruses. Prerequisites: BI 101-102, CH 131 - 132, or permission of the Instructor.

BI 397 Plant Physiology UG 3 credits

The growth and function of plants including cellular physiology, water relations, metabolism, respiration, photosynthesis, nutrition, growth regulation, and the influence of environment. Prerequisites: BI 101-102, CH 131-132, or permission of the Instructor.

BI 404 Biological Evolution UG 2 credits

The theory of evolution and the operation of evolutionary forces as related to modern taxonomy, with emphasis on such topics as mutation, variation, hybridization, polyploidy, isolation, natural selection, and population genetics. Prerequisite: BI 393 or permission of the Instructor.

BI 410 Marine Biology UG 3 credits

An introduction to the marine ecosystems with emphasis on factors involved in the growth, diversity, and distribution of populations occupying the marine habitats of the Eastern Atlantic coast. Prerequisites: BI 281, BI 283, BI 393, BI 397, or permission of the Instructor.

BI 411 Ecology UG**3 credits**

The dynamics and evolution of populations, communities, and ecosystems. Students become acquainted with the communities of Southeastern Massachusetts through field studies. Prerequisites: BI 281, BI 283, BI 393, BI 397, or permission of the Instructor.

BI 413 Mycology UG**3 credits**

An introduction to the fungi: their structure, taxonomy, physiology, and genetics. The techniques and importance of the fungi in solving biological problems will be stressed. Prerequisites: BI 393, CH 131-132, or permission of the Instructor.

BI 420 Developmental Biology UG**3 credits**

A study of developmental processes at different levels of organization with emphasis on animal development. Topics include gametogenesis, fertilization, early embryonic development, organogenesis, differentiation, growth and regeneration. Prerequisites: BI 101-102, CH 131-132, or permission of the Instructor.

BI 422 Radiation Biology UG**3 credits**

The utilization, safety precautions, and biological effects of unstable isotopes and electromagnetic radiation. Prerequisites: BI 101-102, CH 131-132, MA 103-104, PH 181-182, or permission of the Instructor.

BI 427 Cytology UG**3 credits**

Cellular morphology and organization including descriptions of major intracellular processes and the functional significance of cellular structures. Prerequisite: BI 101-102, or permission of the Instructor.

BI 502 Research G**credit to be arranged**

Original research undertaken by an individual in the field of biology. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 9 credits for an M.A. and 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of the topic and outline by the student's adviser.

BI 503 Directed Study G**credit to be arranged**

Directed study in the field of biology. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 6 credits for an M.A. and 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

BI 506 Experimental Morphology of Angiosperms G 3 credits

The growth and development of flowering plants as revealed by experimental modification of their environment, including an investigation of the basic molecular processes involved in genetic control of plant development and their interaction with hormonal mechanisms and environmental influences. Prerequisites: BI 292, BI 393, BI 397, or permission of the Instructor.

BI 507 Comparative Morphology of the Vascular Plants G 3 credits

The vascular plants from the psilopsids to the angiosperms using classical and contemporary data for the evaluation of phylogenetic and phenetic relationships. Prerequisites: BI 292, BI 397, BI 405, BI 427, or permission of the Instructor.

BI 508 Taxonomy of Spermatophytes G 3 credits

A survey of the seed plants: their structure, taxonomy, phylogeny, and ecological importance. Prerequisites: BI 283, BI 507, or permission of the Instructor.

BI 510, 511 Marine Ecology G (NSF) 3 credits for each semester

Environmental dynamics of biota associated with various marine habitats. Species diversity, community structure, adaptation, physiological and behavioral ecology, together with the interrelationships of all factors in the marine environment will be emphasized. Lecture and field laboratory experiences. Prerequisite: A broad foundation in biology and at least one year each of college physics, chemistry, and mathematics, or permission of the Instructor.

BI 523 Neurophysiology I G 3 credits

The physiology of the peripheral nervous systems, receptors, and muscles, considered in both vertebrates and invertebrates. Prerequisite: BI 381, or permission of the Instructor.

BI 524 Neurophysiology II G 3 credits

The central nervous system of invertebrates and vertebrates. Anatomical, physiological, and biochemical aspects. When appropriate, some behavioral studies will be considered. Prerequisite: BI 381, or permission of the Instructor. BI 523 need not precede BI 524.

BI 525 Mammalogy G 3 credits

The classification, distribution, life histories, techniques of collection and preservation, ecology, and ethology of mammals. Prerequisite: BI 282 or permission of the Instructor.

BI 526 Microbial Physiology G 3 credits

An advanced study of bacteria and fungi emphasizing their nutrition, growth, death, and chemical activities. Laboratory work will demonstrate some research methods of microbial physiology and illustrate some representative physiological systems. Prerequisites: BI 300, BI 395, CH 344, or permission of the Instructor.

BI 527 Comparative Ethology G 3 credits

Behavioral adaptations of animals to their environments and way of life. Introduction of the objective analysis of behavior patterns and use of patterns in clarifying evolutionary relationships. Prerequisites: BI 282, BI 381 or BI 385, or permission of the Instructor.

BI 530 Entomology G**3 credits**

A study of the biology and control of insects with emphasis on the taxonomy of the orders and major families. Formation of an identified insect collection is required. Prerequisite: BI 101-102, or permission of the Instructor.

DEPARTMENT OF CHEMICAL SCIENCES

Chairman: Professor Chipman

Professor: Daley

Associate Professors: Marganian, Souza

Assistant Professors: Pagano, Sumner

Master of Arts

The Department of Chemical Sciences offers a program leading to the degree of Master of Arts in Chemistry, which is designed to prepare qualified students for research, further graduate study and teaching. An undergraduate major in chemistry, or its equivalent, is normally required for admission to this program. Applicants must have satisfactorily completed the following courses: one semester of differential calculus, one semester of integral calculus, two semesters of calculus based physics, two semesters of general chemistry with laboratory, one semester of analytical chemistry, two semesters of organic chemistry and two semesters of physical chemistry. Other laboratory courses in chemistry are desirable.

Applicants must have an interview with the Chairman of the Department. No application will be considered unless this requirement has been met.

In addition to meeting general degree requirements, the student must complete at least 30 graduate credits in chemistry which shall include at least six semester hours of thesis credit (CH 502).

Each graduate student must satisfactorily complete the following core curriculum or present evidence that it has been successfully completed.

- CH 450 Instrumental Analysis
- CH 597 Advanced Physical Chemistry I
- CH 598 Advanced Physical Chemistry II
- CH 591 Advanced Organic Chemistry I
- CH 592 Advanced Organic Chemistry II
- CH 444 Advanced Inorganic Chemistry

A reading knowledge of German or Russian is required for the degree. All courses must be approved by the adviser. Departmental offerings are listed below.

Master of Education

The Department of Chemical Sciences offers programs leading to the degree of Master of Education in Secondary Education with a concentration in chemistry or in physical science. These programs are designed primarily for teachers and future teachers of chemistry.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program and approved by his adviser.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

CH 131, 132 General Chemistry with Qualitative

Analysis I-II U

3 credits for each semester

The elements and their compounds, with emphasis on structure and its relation to properties. CH 131 is prerequisite to CH 132. Two lecture periods and one two-hour laboratory period weekly.

CH 141, 142 Inorganic Chemistry with Quantitative

Analysis I-II U

4 credits for each semester

Theoretical inorganic chemistry with emphasis on mass-energy relationships in terms of structure and physical laws. Laboratory work emphasizes quantitative techniques. CH 141 is prerequisite to CH 142. Three lecture periods and one four-hour laboratory period weekly.

CH 200 Survey of Chemistry U

3 credits

The fundamental laws of chemistry are studied together with their application to elements and compounds, reactions and properties. Two lecture periods and one two-hour laboratory period weekly.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

CH 241 Inorganic Quantitative Analysis UG

4 credits

The classical and modern methods for the volumetric and gravimetric determination of elements and groups. Prerequisite: CH 132 or CH 142.

CH 242 Intermediate Inorganic Chemistry UG

3 credits

The descriptive chemistry, as well as synthesis and reactions, of nontransitional elements and their compounds are studied systematically. Correlations of structure and properties are explained on the basis of modern theories. Prerequisite: CH 132, or CH 142.

CH 250 Instrumentation UG

3 credits

The physical chemistry basic to modern analytical instrumentation will be discussed as the basis for the study of instrumental analysis. Lecture and laboratory. Prerequisite: CH 132 or permission of the Instructor.

CH 252 Recent Developments in Inorganic Chemistry UG 3 credits

Current topics, such as ligand field theory of coordination complexes, molecular orbital theory, stereochemistry, crystallography, rare-earth elements, nonaqueous solvents, spectroscopy, and kinetics of inorganic reactions will be treated, according to the interests of the students. Prerequisite: CH 132.

CH 280 Physical Chemistry for Life Sciences UG 3 credits

A study of the laws governing the physical and chemical behavior of compounds of primary interest to students in the Life Science fields. Particular application will be made to the thermodynamics, kinetics and equilibria involved in compounds of biological interest. Prerequisite: CH 131.

CH 290 Environmental Chemistry UG 3 credits

A study of the chemical aspects of such environmentally important problems as air and water pollution, solid waste disposal, thermal pollution, wastewater treatment, environmental antagonists, mercury pollution, the internal combustion engine, or other topics of current interest. Laboratory work will be concerned with techniques for detecting, monitoring and controlling environmental phenomena. Emphasis will be placed on the use of analytical techniques in determining ecological parameters. Lecture, laboratory and assigned special projects in the field. Prerequisite: CH 132.

CH 343, 344 Organic Chemistry UG 4 credits each

A survey will be made of the chemistry of organic compounds from the points of view of synthesis, structure and reactions, including some study of the mechanisms of organic reactions. Prerequisites: CH 132, or CH 142 and permission of the Instructor.

CH 381, 382 Physical Chemistry UG 4 credits each

The laws governing the physical and chemical behavior of compounds. Prerequisites: CH 132 and MA 210. CH 381 is a prerequisite for CH 382.

**CH 390 Research Problems in Chemistry UG
credit and hours to be arranged**

Special projects for advanced students desiring individual instruction in the methods of chemical research. Prerequisite: permission of the department.

CH 440 Advanced Organic Chemistry G 3 credits

Selected topics in organic chemistry such as physical organic chemistry, mechanisms, alicyclic and heterocyclic chemistry or advanced synthetic methods. Prerequisite: CH 343, 344 and permission of the Instructor.

**CH 441, 442 Qualitative Organic Analysis UG
3 credits for each semester**

The reactions of organic compounds with emphasis on reactions of importance for classification and identification. Laboratory work involves the identification of both simple compounds and mixtures. Prerequisite: CH 344.

CH 444 Advanced Inorganic Chemistry UG 3 credits

The topics of group theory, stereochemistry, ligand field theory, molecular orbital theory, synthesis and kinetics of reactions as applied to transition metal elements will be treated in detail. CH 382 may be taken concurrently. Prerequisite: CH 382.

CH 450 Instrumental Analysis UG *3 credits*

Theory and practical application of instrumental methods are applied to chemical analysis. The course will include pH measurements, electrodeposition, potentiometry and spectroscopy. Prerequisites: CH 381 and CH 382. CH 382 may be taken concurrently.

CH 461, 462 General Biochemistry UG *3 credits for each semester*

A survey will be made of the chemical components of living matter and the major processes of cellular metabolism. Prerequisites: CH 344, and permission of the Instructor.

CH 480 Special Topics in Physical Chemistry G *3 credits*

Topics of an advanced nature in physical chemistry will be selected, with an emphasis on recent developments in the field. Possible topics: N.M.R., E.S.R., elementary quantum mechanics, statistical thermodynamics. Prerequisites: CH 382 and permission of the Instructor.

CH 481, 482 Modern Structural Chemistry G *3 credits each semester*

The structural approach, based on the concept of electron pairing in molecular orbitals, will be applied to inorganic and, to a lesser extent, organic chemistry. Topics to be covered will include: electronic structure and chemical bonding, spectroscopy, acid-base chemistry, stereochemistry, equilibrium, elementary thermodynamics, electrochemistry and modern nuclear chemistry. Prerequisite: permission of the Instructor.

CH 502 Research G *credit to be arranged*

Original research undertaken by an individual in the field of chemistry. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 9 credits for an M.A. and 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

CH 503 Directed Study G *credit to be arranged*

Directed study in the field of chemistry. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 6 credits for an M.A. and 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

CH 581 Structural Organic Chemistry G *3 credits*

Organic Chemistry from a structural viewpoint. Topics to be studied will include the following: elementary molecular orbital theory, the structure and charge distribution of functional groups, structure proof by physical and chemical methods, infra-red, ultraviolet and nuclear magnetic resonance spectroscopy; mass spectrometry, stereochemistry, resonance, inductive effects, and steric effects.

Practical experience with IR, UV, NMr, and mass spectra, and the determination of the structure of an organic molecule will be a part of the laboratory. Prerequisite: CH 132 or 142 or 481 or 585.

CH 582 Biochemistry G **3 credits**

Chemical components of living matter and of the major processes of cellular metabolism, including the fundamental chemical characteristics of biological compounds and enzymatic reactions. Prerequisite: CH 132 or 142 or 481 or 585.

CH 583 Dynamic Organic Chemistry G **3 credits**

Modern organic chemistry from a mechanistic viewpoint. Topics to be studied will include the following: The kinetics of organic reactions, determination of the mechanisms of organic reactions, addition reactions, elimination reactions, substitution reactions, molecular rearrangements, the reaction of carbonium ions, carbanions and free radicals, photochemistry and the conservation of orbital symmetry. Prerequisite: CH 132 or 142 or 481 or 585.

CH 584 Survey of Biochemical Reactions G **3 credits**

Biochemical reactions from a mechanistic viewpoint. Emphasis will be placed on the study of the mechanism of reactions that are important in biochemical systems. Topics to be studied will include: the role of inorganic ions in biochemistry, mechanism of enzyme action, oxidative phosphorylation and electron transport, biogenetic schemes, and the transfer of genetic information. Prerequisite: A knowledge of organic chemistry (CH 583 or equivalent).

CH 585 Atomic and Molecular Structure G **3 credits**

A modern approach to atomic and molecular structure will be developed and applied to selected cases from inorganic and organic chemistry. Topics to be covered will include the following: atomic structure, the molecular orbital approach to molecular structure, antibonding orbitals, introductory ligand field theory, geometrical and optical isomerism, conformational analysis, correlation of structure and reactivity, and the conservation of orbital symmetry. Prerequisite: permission of the Instructor.

CH 587-588 Modern Chemistry I, II G **3 credits each semester**

An introduction to recent developments in chemistry. Topics to be covered will be chosen from the following areas: atomic structure, bonding, spectroscopy, acid-base chemistry, stereochemistry, kinetics, equilibrium, elementary thermodynamics, electrochemistry and nuclear chemistry. Environmental aspects of topics will be developed and the laboratory will be concerned with analysis for environmentally important parameters. Prerequisite: permission of the Instructor.

CH 591 Advanced Organic Chemistry I, Structure G **3 credits**

Instrumental techniques of organic structure determination such as infra-red, ultraviolet and proton magnetic resonance spectroscopy and methods of separation and identification. Classic examples of modern structure proofs will be considered in detail. Students will conduct a literature search on the structure of an organic molecule and present a short seminar on this structure proof. Practical experience with IR, UV, NMR and gas chromatography of the structure of an unknown organic molecule. Prerequisite: CH 344.

**CH 592 Advanced Organic Chemistry II, Mechanism
 and Synthesis G****3 credits**

A one-semester course in advanced organic chemistry designed for participants who have some background in elementary organic chemistry. Topics to be considered will include recent developments in the mechanism of organic reactions and organic synthesis. Special topics may include valence tautomerism, biogenetic synthesis, photochemistry, cycloaddition reactions and the Woodward-Hoffman rules for the conservation of orbital symmetry. Prerequisites: CH 344 and 591, or permission of the Instructor.

**CH 597 Advanced Physical Chemistry I, Chemical
 Thermodynamics and Statistical Thermodynamics G****3 credits**

The zeroeth, first and second laws of thermodynamics, entropy and free energy functions, probability and the thermodynamic functions from a statistical consideration, the partition function. Prerequisite: CH 382.

**CH 598 Advanced Physical Chemistry II, Atomic and
 Molecular Structure and Kinetics G****3 credits**

An introduction to quantum chemistry, rotational and vibrational energy levels, first, second and third order reactions, the Arrhenius Equation and energy of activation, consecutive reactions, collision and transition state theories. Prerequisite: CH 382.

DEPARTMENT OF EARTH SCIENCES AND GEOGRAPHY

Chairman: Professor Maier

Professors: I. Furlong, Macewicz

Associate Professors: Boutilier

Assistant Professors: Blackford, Enright, M. Furlong, Stewart

Instructor: Dillman

The Department of Earth Sciences and Geography offers programs leading to the degree of Master of Education in Secondary Education with a concentration in either earth sciences or geography. These programs are designed primarily for teachers and future teachers of earth sciences and geography. They also prepare students for further work in either earth sciences or geography.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Ordinarily, Comprehensive Examinations are given by the Department during the months of November and April only. Special arrangements must be made prior to June by the student with his adviser, if the student wishes to take the Comprehensive Examination during July.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

ES 181 Physical Geology U *3 credits*
The constitution of the earth and the processes acting on and within it. Field trips. May be followed by either ES 182 or ES 192. Two lecture periods and one two-hour laboratory period weekly.

ES 182 Physical Geography U *3 credits*
Selected elements of man's environment such as the atmosphere, climate, soils, and vegetation. Man's role in altering these elements. Field trips. Two lecture periods and one two-hour laboratory period weekly.

ES 200 Fundamentals of Geography U *3 credits*
Man-land relationships and the interaction of man with his total environment, including its landforms, atmosphere, climate, vegetation, and soils. Designed especially for students working for a B.S. degree in Elementary Education. Two lecture periods and one two-hour laboratory period weekly.

ES 261, 262 World Regional Geography U *3 credits for each semester*
Geographical context of current social economic and political problems in Europe, the U.S.S.R., the Orient, the Middle East, the Pacific World, Africa, Latin America, and Anglo-America. Geographical features characteristic of each country and their relationship to a functioning political and economic unit. Either semester may be taken independently.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

ES 107 Management and Preservation of Natural Environment UG *3 credits*
This course is devoted to a detailed examination of the occurrence, exploitation and conservation of natural resources, including minerals, soils, water, forests, grasslands, fisheries, wildlife, recreation areas and scenery. Public and private conservation policy is examined against current technical and philosophical developments. Emphasis is placed on conservation in the United States. Prerequisite: permission of the Instructor.

ES 192 Historical Geology UG *3 credits*
The origin and evolution of the earth and the life upon it. Prerequisite: ES 181.

ES 252 Geography of Anglo-America UG *3 credits*
A description of the relationships between relevant physical and cultural features of regions in the United States and Canada. Prerequisite: ES 181, ES 182, or ES 200.

- ES 301 Astronomy I UG 3 credits**
A study of the earth, moon, planet, sun, and other stars and galaxies. Emphasis is placed on such topics as the new findings of radio astronomy and the uses of earth satellites. Day and evening observations. Prerequisite: MA 103-104 or permission of the Instructor.
- ES 302 Astronomy II UG 3 credits**
Stars, galaxies, stellar evolution, instrumentation, and cosmology. Day and evening observations. Prerequisite: MA 103-104 or permission of the Instructor.
- ES 303 Meteorology UG 3 credits**
An analysis of weather elements, atmospheric circulation, fronts and the instruments that measure and record these phenomena. Prerequisite: ES 182 or ES 200 or permission of the Instructor.
- ES 304 Climatology UG 3 credits**
Climatic elements and climatic controls and their application to the analysis of climatic regions of the world. Prerequisite: ES 303.
- ES 305 Oceanography I UG 3 credits**
Survey of marine biology and chemistry with emphasis on current research as well as past achievements in each field. Prerequisite: BI 101-102 or permission of the Instructor.
- ES 306 Oceanography II UG 3 credits**
Ocean water temperature, circulation, shore lines, ocean basins, and mineral resources. Prerequisite: MA 101-102 or MA 103-104 or permission of the Instructor.
- ES 315 Cartography UG 3 credits**
Graphic presentation of geographic data, and the latest techniques of map construction.
- ES 353 Urban Geography UG 3 credits**
Geographic aspects of the city, including location, function, land use patterns, and tributary areas, will be analyzed. Prerequisite: permission of the Instructor.
- ES 362 Economic Geography UG 3 credits**
Simple models and frameworks of the various ways in which man organized his economic activity. Problems of spatial structure, arrangements and patterns of economic activity. Prerequisite: permission of the Instructor.
- ES 363 Field Methods in Economic Geography UG 3 credits**
The testing of theories and concepts of economic location in the local area. Prerequisite: ES 362.
- ES 372 Mineralogy UG 4 credits**
Geometrical and X-ray crystallography followed by the determinative mineralogy of ore and rock-forming minerals. Two lecture periods and two two-hour laboratory periods weekly. Prerequisite: ES 181 and CH 132.
- ES 461 Geography of Africa UG 3 credits**
The physical and cultural features of the African continent with special reference to the emerged political and regional patterns. Prerequisite: ES 182 or permission of Instructor.

- ES 462 Geology of North America UG** **3 credits**
The physiographic provinces of North America will be studied in terms of their geomorphology and structural relationships. Prerequisite: ES 181.
- ES 463 Petrology UG** **3 credits**
Megascopic and microscopic classification of rocks and an introduction to petrogenesis. Prerequisite: ES 181, CH 131-132, ES 372 or permission of the Instructor.
- ES 464 Economic Geology UG** **3 credits**
Geochemical and physical processes that produce metallic and non-metallic mineral deposits. Prerequisite: ES 181.
- ES 475 Paleontology UG** **3 credits**
A survey of the fossil record stressing the most important invertebrate and vertebrate phyla and their environmental relationships. Two lecture periods and one two-hour laboratory period weekly. Prerequisite: ES 181, 192, or consent of the Instructor.
- ES 483 Structural Geology UG** **3 credits**
Analysis and origin of rock structures. Prerequisite: ES 181.
- ES 484 Geomorphology UG** **3 credits**
Relationships between gradational and tectonic forces and the resulting surface configuration of the earth. Prerequisite: ES 181, and ES 182.
- ES 502 Research G** **credit to be arranged**
Original research undertaken by an individual in the field of earth science or geography. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.
- ES 503 Directed Study G** **credit to be arranged**
Directed study in the field of earth science or geography. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.
- ES 504 Geography of USSR G** **3 credits**
The geography of environment, resources and population are studied in relation to history and the present economic and social system of the Soviet Union. Prerequisite: ES 200 and ES 252, or ES 181 and ES 182, and permission of the Instructor.

ES 513, 514 Field Methods in Earth Science (NSF) G**3 credits per semester**

The development by participants of inquiry oriented field investigations for use by local school systems. Background lectures in field mapping techniques and regional geology. Open only to NSF participants.

DEPARTMENT OF MATHEMATICS

Chairman: Associate Professor Abramson

Associate Professors: Bent, Chiccarelli, D'Alarcao, Lemos, Mailloux, Makokian

Assistant Professors: Gleason, Lambiase, Quindley, Scalisi, Simpson

Instructors: Moore, Sutherland

The Department of Mathematics offers a program leading to the degree of Master of Education in Secondary Education with a concentration in mathematics. This program is designed primarily for teachers and future teachers of mathematics. It also prepares students for further graduate work in mathematics. Admission to the graduate program requires a minimum of eighteen credits of undergraduate mathematics or the approval of the Chairman of the Department. In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program. Students should receive approval from their advisor or from the Chairman of the Department for those courses requiring permission of the department.

A minimum of 18 graduate credits in mathematics is required for the degree.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following **undergraduate** courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

MA 103, 104 Mathematical Analysis I-II U 3 credits for each semester

Sets, algebraic functions and their graphs, topics from algebra, trigonometric functions and analytic geometry of the line and conic sections, differentiation and integration of algebraic functions and their applications. Required of all freshman candidates for a degree in Biology or Earth Science.

MA 105 College Mathematics I U 3 credits

Set theory, elementary logic, modular systems, introduction to groups and fields with emphasis on number systems, finite geometry. Required of all freshmen not majoring in the sciences or behavioral sciences.

MA 106 College Mathematics II U 3 credits

Linear and quadratic equations, functions and their graphs, trigonometry, analytic geometry of the straight line and conic sections. Mathematics elective for non-science majors. Prerequisite: MA 105.

MA 110 Elementary Statistics U**3 credits**

Variance, covariance, linear correlation, general regression lines, introduction to sampling theory; and the following distributions: normal, t , chi-square and F . Required of all freshmen who are candidates for a degree in Health and Physical Education or the behavioral sciences.

MA 190 Computer Programming U**3 credits**

For non-science majors. The computer as a calculator, stored programs, encoding, solution of simple arithmetic and algebraic problems. Prerequisite: MA 105 or permission of the department.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

MA 210 Calculus I UG**3 credits**

Inequalities, relations, functions, limits, and continuity, the differentiation of algebraic functions, with applications to geometry, maxima and minima. Credits earned in this course may not be used in partial fulfillment of requirements for the degree of Master of Education in Secondary Education with a concentration in mathematics. Prerequisite: MA 106 or equivalent.

MA 211 Calculus II UG**3 credits**

Continuation of Calculus I. The definite integral, differentiation and integration of the trigonometric and exponential functions, methods of integration, applications. Credits earned in this course may not be used in partial fulfillment of requirements for the degree of Master of Education in Secondary Education with a concentration in mathematics. Prerequisite: MA 210 or equivalent.

MA 212 Calculus III UG**3 credits**

Continuation of Calculus II. Methods of integration and applications, partial differentiation, infinite series, multiple integration, applications. Prerequisite: MA 211 or equivalent.

MA 290 Computer Science I UG**3 credits**

For science majors. Fixed and floating point formats, computer languages, flow-charting, encoding, elementary numerical analysis. Prerequisite: MA 211 or MA 104 or permission of the department.

MA 301 Abstract Algebra I UG**3 credits**

Introduction to the theory of rings, integral domains and fields through a study of integers, rational numbers, real numbers, complex numbers and polynomials; elementary group theory. Prerequisite: permission of the department.

MA 303 Number Theory UG**3 credits**

Development of the number system, the Euclidean Algorithm and its consequences, theory of congruences, number-theoretic functions, Diophantine equations, quadratic residues. Prerequisite: permission of the department.

- MA 304 Higher Geometry UG** **3 credits**
Axiomatic systems, finite geometries, introduction to synthetic and analytic projective geometry, affine geometry, non-Euclidean geometry. Prerequisite: permission of the department.
- MA 307 Linear Algebra I UG** **3 credits**
Vectors and analytic geometry of space, vector spaces, systems of linear equations, determinants, linear transformations, and matrices. Prerequisite: permission of the department.
- MA 308 Linear Algebra II UG** **3 credits**
Linear transformations and matrices, the algebra of matrices, bilinear and quadratic forms, polynomial rings, characteristic values and vectors of linear transformations, similarity of matrices, applications. Prerequisite: MA 307 or equivalent.
- MA 316 Differential Equations UG** **3 credits**
Ordinary differential equations of first and second order, linear differential equations with constant coefficients, the Laplace transform, applications. Prerequisite: MA 212 or equivalent.
- MA 317 Sequences and Series UG** **3 credits**
Elementary point-set theory, Heine-Borel theorem, Cauchy sequences, convergence tests for infinite series, absolute convergence, power series, Taylor series and Fourier series. Prerequisite: MA 212 or equivalent.
- MA 325 Foundations of Geometry UG** **3 credits**
A study of axiomatic systems, finite geometries, axiomatic Euclidean geometry, various non-Euclidean geometries, Klein's Erlangen program, transformation groups, invariant properties. Prerequisite: permission of the department.
- MA 326 Projective Geometry UG** **3 credits**
The principle of duality, perspectivity, projectivity, harmonic sets, cross ratio, transformation groups, projective theory of conics. Prerequisite: permission of the department.
- MA 351 Modern Mathematics for Elementary School Teachers I UG** **3 credits**
Modern mathematics for teachers of grades 4, 5, 6. A study of base positional notation and arithmetic of different bases, elementary set theory and logic, the real number system and its subsystems.
- MA 352 Modern Mathematics for Elementary School Teachers II UG** **3 credits**
Modern mathematics for teachers who have successfully completed the Level I course or its equivalent. A continuation of the study of the number systems of arithmetic and their applications to algebra and informal geometry. Prerequisite: MA 351.
- MA 353 Modern Algebra for Elementary School Teachers UG** **3 credits**
The integers, integral domains, and topics from number theory, equivalence relations and congruences; real numbers, complex numbers, and fields; polynomials, group theory. Prerequisite: MA 352 or equivalent.

MA 354 Modern Geometry for Elementary School**Teachers UG****3 credits**

Plane geometric figures, curves and surfaces, congruence, measures, coordinate geometry, parallelism and similarity, non-Euclidean geometries. Prerequisite: MA 352 or equivalent.

MA 401 Advanced Calculus I UG**3 credits**

Fundamental theorems on limits and continuity, properties of derivatives, theory of integration. Prerequisite: MA 212 or equivalent.

MA 402 Advanced Calculus II UG**3 credits**

Functions of several variables, partial derivatives, multiple integrals, sequences and series. Prerequisite: MA 401 or equivalent.

MA 403 Probability Theory UG**3 credits**

Permutations and combinations, calculus of probabilities, discrete and continuous random variables, expectation, elementary probability distributions, methods of estimation, sample spaces. Prerequisite: MA 212 or equivalent.

MA 406 Theory of Sets and Elementary Logic UG**3 credits**

Truth tables, rules of inference, method of proof, the algebra of sets, graphs of functions, and cardinal numbers. Prerequisite: MA 211 or permission of the department.

MA 408 History of Mathematics UG**3 credits**

The development of elementary mathematics from ancient to modern times. Prerequisite: permission of the department.

MA 412 Mathematical Statistics UG**3 credits**

Fundamental statistical methods, tests of significance and estimation based on large or small samples, simple correlation, linear regression, statistical inference, sequential analysis. Prerequisite: MA 403 or equivalent.

MA 415 Numerical Analysis UG**3 credits**

Solution of algebraic and transcendental equations: general iteration method, Newton-Raphson method. Approximation of functions and curvefitting: Lagrange interpolation formula, Newton's forward difference method, method of least squares, orthogonality. Numerical integration, Euler-Cauchy technique. Prerequisite: MA 212 or equivalent.

MA 416 Vector Analysis UG**3 credits**

Elementary set theory, vector space theory, inner product spaces, vector algebra, vector differential calculus, differential invariants, integral vector calculus, Stoke's theorem. Prerequisite: MA 212 or equivalent.

MA 418 Complex Function Theory UG**3 credits**

Analytic functions of a complex variable, differentiation and integration in the complex plane, Cauchy's theorems, infinite series, Laurent expansions, theory of residues. Prerequisite: MA 401.

MA 421 Analytic Geometry for Elementary School**Teachers UG****3 credits**

Trigonometric functions and analytic trigonometry, analytic geometry of the straight line and conic sections. Prerequisite: MA 352 or equivalent.

- MA 422 Probability and Statistics for Elementary School Teachers UG** *3 credits*
Permutations and combinations, finite sample spaces, random variable, binomial distributions, statistical applications. Prerequisite: MA 352 or equivalent.
- MA 425 Calculus for Elementary School Teachers UG** *3 credits*
Graphs and curves, functions, differentiation and integration of algebraic and transcendental functions, applications. Prerequisite: MA 352 or equivalent.
- MA 465 Applied Mathematics UG** *3 credits*
The partial differential equations of physics, orthogonal functions, integral transforms. Prerequisite: MA 212 or equivalent.
- MA 502 Research G** *credit to be arranged*
Original research undertaken by an individual in the field of mathematics. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.
- MA 503 Directed Study G** *credit to be arranged*
Directed study in the field of mathematics. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.
- MA 507 Topology G** *3 credits*
Elements of point set topology, closed sets and open sets in metric spaces, continuous mappings, connection, separation theorems, and compactness. Prerequisite: MA 301 or equivalent.
- MA 510 Group Theory G** *3 credits*
Groups, subgroups, homomorphisms, normal subgroups and quotient groups, generators, normal structure and the Jordan-Holden theorem, direct products of groups. Prerequisite: MA 301 or equivalent.
- MA 511 Ring Theory G** *3 credits*
Examples of rings, ideals and homomorphisms, the Jacobson radical, direct sums, Boolean rings, rings with chain conditions. Prerequisites: MA 301 or equivalent.
- MA 549 Foundations of Mathematics G** *3 credits*
A rigorous development of number systems. Peano axioms and natural numbers. Integers and rational numbers by means of ordered pairs. Cauchy sequences and real numbers. Complete ordered fields. Prerequisite: permission of the department.

MA 583 Number Theory (NSF) G**3 credits**

A study of the Euclidean Algorithm and its consequences, unique factorization theorem, theory of congruences, Diophantine equations, number-theoretic functions, the theorems of Euler and Fermat, quadratic residues and the law of quadratic reciprocity. This course is open only to participants in the National Science Foundation In-Service Institute.

MA 586 Analytic Projective Geometry (NSF) G**3 credits**

The projective plane, natural homogeneous coordinates, vector theory, generalized coordinate systems and linear transformations, classification theories and the Erlanger program, metric complex geometry, introduction to non-Euclidean geometry. This course is open only to participants in the National Science Foundation In-Service Institute.

MA 590 Statistics with Computer Programming I G**3 credits**

Those topics covered will include: the mean, the mode, the median, variance, standard deviation, Pearson correlation coefficient, Spearman rank correlation coefficient, lines of regression, central limit theorem, and confidence intervals for the population mean. There will be an introduction to digital computers and computer programming with applications to statistical problems.

MA 591 Statistics with Computer Programming II G**3 credits**

Among those topics covered will be hypothesis-testing, small and large sampling theory, Chi-square analysis, and one-way analysis of variance. There will be a continuation of the topics in computer programming.

DEPARTMENT OF PHYSICS

Chairman: Professor Calusdian

Professors: Palubinskas, Weygand

Associate Professors: Blanchard, Harris

The Department of Physics offers programs leading to the degree of Master of Education in Secondary Education with a concentration in either physics or physical sciences. These programs are designed primarily for teachers and future teachers of physics or physical sciences. They also prepare students for further graduate work in either physics or physical sciences.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following undergraduate courses are prerequisites for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

PH 181 Elements of Physics I U *3 credits*
Principles of mechanics, heat and sound. Two lecture periods and one two-hour laboratory period weekly.

PH 182 Elements of Physics II U *3 credits*
Principles of electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory weekly. Prerequisite: Ph 181.

PH 200 Survey of Physics U *3 credits*
Elements of mechanics, heat, electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory weekly.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

PH 243 General Physics I UG *4 credits*
Calculus based study of mechanics and heat. Three lecture periods and one three-hour laboratory weekly. Prerequisite: MA 102.

PH 244 General Physics II UG *4 credits*
Calculus based study of electricity, magnetism and light. Three lecture periods and one three-hour laboratory weekly. Prerequisite: PH 243.

PH 371 Biophysics, Macroscopic Aspects UG *3 credits*
The structure, function, and control of the skeletal, muscular, nervous, blood-vascular and other body systems of the human being on the macroscopic or large-system level. Prerequisite: permission of the Instructor.

PH 372 Biophysics, Microscopic Aspects UG *3 credits*
The structure, function, and control of the human body on the microscopic or molecular level. May be taken independently of PH 371. Prerequisite: permission of the Instructor.

PH 381 Thermal Physics UG *3 credits*
Thermodynamics; kinetic theory; and statistical mechanics. Prerequisite: PH 243, PH 244.

PH 385 Optics UG *4 credits*
Study of geometrical and physical optics. Prerequisite: PH 244.

PH 387 Modern Physics UG *3 credits*
Theory of relativity; atomic structure; quantum theory; nuclear physics and elementary particles. Prerequisite: PH 243, PH 244.

PH 388 Electricity and Magnetism UG *4 credits*
Electrostatic and magnetic theory, direct and alternating current circuits, introduction to Maxwell's equations and radiation. Prerequisite: PH 243, PH 244.

- PH 389 Mechanics UG** *3 credits*
Vector treatment of forces, torques; dynamics of particles and rigid bodies; work and energy; momentum; small oscillation theory; Lagrangian and Hamiltonian formulation of dynamics. Prerequisite: PH 243.
- PH 392 Electronics UG** *4 credits*
Study of electron tubes, semiconductors, and electronic circuits. Prerequisite: PH 244.
- PH 393 Special Topics in Modern Physics UG** *3 credits*
Topics to be chosen from among the areas of the theory of relativity, quantum mechanics, solid state and nuclear physics. Prerequisite: PH 387 or its equivalent
- PH 402 Quantum Mechanics UG** *3 credits*
Wave nature of matter; the schrodinger equation; application of the schrodinger equation to the electron, the hydrogen atom, multi-electron atoms and radiation. Prerequisite: PH 403.
- PH 403 Mathematical Physics UG** *3 credits*
Vector analysis; matrices; linear differential equations; Sturm-Liouville theory; Fourier series; orthogonal functions; Laplace transform. Prerequisite: PH 243, PH 244, MA 103.
- PH 405 Nuclear Physics UG** *3 credits*
Nuclear Forces, Nuclear Models, Nuclear Reactions, Radioactivity, and Elementary Particles. Prerequisite: PH 387.
- PH 502 Research G** *credit to be arranged*
Original research undertaken by an individual in the field of physics. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.
- PH 503 Directed Study G** *credit to be arranged*
Directed study in the field of physics. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.
- PH 583 Physics of the Atom G** *3 credits*
A study of the atomic view of matter and radiation. Topics included are: the kinetic theory of gases, theory of the electron, Bohr's theory of the atom, many electron atoms, theory of molecules and spectra, and the theory of relativity. Prerequisite: permission of the Instructor.

- PH 584 Physics of the Nucleus and Elementary Particles G 3 credits**
A study of the nucleus and relationship of the elementary particles. The topics included are: nuclear structure, radioactivity, nuclear reactions, nuclear accelerators, conservation laws, symmetry and invariance principles, unified view of the elementary particles, and cosmic rays. Prerequisite: permission of the Instructor
- PH 585 Physics of the Solid State G 3 credits**
A unified treatment of the basic models used to describe solid state phenomena. Topics included are: crystal structure; electric, magnetic, and thermal properties of matter; transport properties of metals and semi-conductors; band theory; super conductivity. Prerequisite: permission of the Instructor.
- PH 587 Radiation Physics I G 3 credits**
Wave propagation and the electromagnetic spectrum, interference, diffraction, polarization, coherence theory, electromagnetic theory. Prerequisite: permission of the Instructor.
- PH 588 Radiation Physics II G 3 credits**
Blackbody radiation, photo-electric effect, the Bohr Model of the Atom and Atomic Spectra, the Schrodinger equation and applications of radiation problems. Prerequisite: permission of the Instructor.
- PH 589 Physics of the Solar System G 3 credits**
Physical properties and motion of the members of the Solar System and interplanetary medium. Prerequisite: permission of the Instructor.
- PH 590 Astrophysics and Cosmology G 3 credits**
Physical properties of the stars, stellar evolution, galaxies and the structure and history of the universe. Prerequisite: permission of the Instructor.
- PH 591 The Theory of Relativity G 3 credits**
Historical background of the Special Theory of Relativity, the Lorentz Transformation, the Space-Time Continuum, applications to mechanics and electrodynamics, Mach's principle, equivalence principle, the general theory of relativity and applications to Cosmology. Prerequisite: PH 244.
- PH 594 Special Topics in Junior High Science I G 6 credits**
An introduction to the Junior High School science programs developed by the Princeton Project and by the Educational Research Council of America. Lectures, laboratory work, model classes, and field trips will be included in this course. Prerequisite: permission of the Instructor.
- PH 595 Special Topics in Junior High Science II G 3 credits**
A continuation of the course Ph 594 in which the Princeton Project and the Educational Research Council's Junior High science programs are studied and evaluated. Prerequisite: PH 594.

DIVISION OF PROFESSIONAL EDUCATION

DIRECTOR: PROFESSOR CLEMENT

Educational Services

Elementary Education

Health & Physical Education for Men

Health & Physical Education for Women

Instructional Media

Library Science

Secondary Education

DEPARTMENT OF EDUCATIONAL SERVICES

Chairman: Professor Clement

Professors: Daniel, Deasy, DiNardo

Associate Professors: DeLeo, Dooley

Assistant Professors: Ash, Bizinkauskas, Fanning, King, Prescott, Worden

Instructor: M. Jones

The Department of Educational Services offers programs leading to the degree of Master of Education in the following fields:

Guidance

Reading

School Administration

Special Education

Special Education - Learning Disabilities

Courses associated with all of the above degree programs are listed after the descriptions of these programs. Required courses and appropriate electives, which may be approved by the adviser for each degree program, are designated by code letters in parentheses directly below each course title. The key to this code follows.

G — Guidance

LD — Learning Disabilities

R — Reading

A — School Administration

S — Special Education

Orientation Meetings for Applicants

Two meetings have been scheduled in November and two in April for those who may be interested in any of the degree programs outlined below. Potential applicants should plan to attend one of these meetings prior to the completion of all admission requirements. At the close of each session, individual interviews will be scheduled for those who are required to have interviews as well as for those who elect to have them. Please consult the Calendar of the Graduate School for the time and place of these meetings.

Master of Education in Guidance

The Master of Education in Guidance is designed for present and future counselors and guidance directors. Only those who have completed one year of successful full-time teaching at the appropriate level in an accredited school will be considered for admission to this program. Applicants must file the form **Certificate of Teaching**. Prior to ac-

ceptance all applicants must have an interview with the Department of Educational Services.

The student must satisfactorily complete:

1. General degree requirements. (9 credits)
2. ED 430, ED 530, ED 534, and either ED 443 or ED 450. (12 credits)
3. Departmental concentration electives. (9 or more credits)
The latter is met through the election of courses appropriate to the degree program and approved by the student's adviser.

Master of Education in Special Education

The Master of Education in Special Education is designed for teachers and future teachers of handicapped children and exceptional children. The student may concentrate in work related to the mentally retarded, physically handicapped, or emotionally disturbed. Prior to acceptance all applicants must have an interview with the Department of Educational Services.

The student must satisfactorily complete:

1. General degree requirements. (9 credits)
2. ED 410, ED 411, and PY 228. (9 credits)
3. Departmental concentration electives. (12 or more credits)
The latter is met through the election of courses appropriate to the degree program and approved by the student's adviser.

Master of Education in Special Education-Learning Disabilities

The Master of Education in Learning Disabilities is designed for experienced teachers and completion of one year of successful teaching in an accredited school is highly recommended. Prior to acceptance all applicants must have an interview with the Department of Educational Services.

The student must satisfactorily complete:

1. General degree requirements. (9 credits)
2. ED 515, ED 516, ED 517, ED 518, and ED 524. (15 credits)
3. Departmental concentration electives. (6 or more credits)
The latter is met through the election of courses appropriate to the degree program and approved by the student's adviser.

Master of Education in Reading

The Master of Education in Reading is designed for present and future curriculum specialists in reading and language, reading consultants, reading supervisors, and teachers of remedial reading. It is planned for experienced teachers, and only those who have completed one year of successful full-time classroom teaching in an accredited school will be considered for admission to the program. Applicants must file the form **Certificate of Teaching**. Prior to acceptance all applicants must have an interview with the Department of Educational Services.

The student must satisfactorily complete:

1. General degree requirements. (9 credits)
 2. ED 541, ED 542, ED 543, ED 544. (12 credits)
 3. Departmental concentration electives. (9 or more credits)
- The latter is met through the election of courses appropriate to the degree program and approved by the student's adviser.

Master of Education in School Administration

This program is designed to prepare students for the following positions in school administration:

- Superintendent
- Curriculum Director, Supervisor, or Director of Instructional Resources
- Business Manager
- Director of Pupil Personnel Services
- Elementary Principal
- Secondary Principal
- Department Chairman
- Director of Student Activities

In addition to meeting general degree requirements, the student must satisfactorily complete a concentration in one of the above areas. It should be understood that those who anticipate preparing for some of these positions, such as superintendent, should plan to do graduate work beyond the master's degree.

Prior to acceptance, all applicants must complete a school administration questionnaire and have an interview with the Educational Services Department. Applicant will be apprised of the time and place of this interview by the Graduate School. Only those who have completed one year of successful full-time teaching in an accredited school will be considered for admission to this program. Applicants must file the form **Certificate of Teaching**. Applicants who plan to prepare for administrative positions at the elementary school level must have fulfilled the teaching requirement at the elementary school level, and those who plan to prepare for administrative positions at the secondary school level must have fulfilled the teaching requirement at the secondary school level.

Course Offerings

ED 490 Supervised Teaching in the Public Schools-Secondary, ED 491 Supervised Teaching in the Public Schools-Special Education, and ED 492 Supervised Teaching in the Public Schools-Elementary are available for undergraduate credit for those who need to complete student teaching. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

ED 331 Developmental Reading in the Secondary School UG (LD,R) 3 credits

The techniques used to develop reading skills in the secondary school, evaluation of the modern reading materials available, a study of techniques used to analyze students' reading needs and a survey of administration of reading programs in the secondary school with implications for teachers as well as administrators. Prerequisite: PY 200.

ED 402 Team Teaching UG 3 credits

Emphasis will be placed on the nature, objectives, and development of the team teaching idea, its organization, team makeup, planning and instruction; student grouping and scheduling; facilities, materials, and equipment; instruction and adaptation to existing conditions; the ungraded school; and team teaching and the community. Prerequisite: PY 200.

ED 403 Professional Ethics UG 3 credits

Ethical principles upon which the Education Profession is based, those standards which should guide professional service in a moral not legal sense. Emphasis will include: criteria of a profession as applied to teaching; responsibility and privileges of the profession; codes of ethics — nature, formation, interpretation, application, and enforcement; professional organizations — purpose, organization and achievements; relation of the professional role to private life; and interpretation of specific current situations including those suggested by class members. Prerequisite: ED 480.

ED 404 Fundamentals of Data Processing UG 3 credits

Introduction to the theory and methodology of electronic data processing. Development of the history and classification of computers. Examination of machine and symbolic languages, storage methods, peripheral equipment and numbering systems. Emphasis on the role of the computer in the educational systems of today. Prerequisite: MA 110.

ED 405 Teaching Basic Driver Education UG 3 credits

Basic knowledge and skills in teaching Driver Education. Emphasis will be placed on human characteristics of the driver, classroom techniques and driving skills. Acceptable for certification. Prerequisite: PY 200.

ED 410 Introduction to Special Education UG (LD,S) 3 credits

A survey of all phases of special education emphasizing the program for mentally and physically handicapped children, for emotionally disturbed children, and for academically talented. The slow learner and the perceptually handicapped will receive consideration. Prerequisite: PY 200.

ED 411 Methods and Materials in Special Education UG (S) 3 credits

Special emphasis will be placed on philosophy, general and specific aims, identification and classification, curriculum development, and the planning, developing, and guiding of pupil experiences in the educational program for retarded children. Prerequisite: ED 410.

ED 412 Organization and Administration of Special Education UG

3 credits

(S)

A comprehensive study of the psychological diagnosis, the personnel, the curriculum, the facilities, the complete pupil services in an effective Special Education program. Prerequisite: ED 410.

ED 413 Industrial Arts in Special Education UG

3 credits

(S)

The planning procedure, the necessary equipment, and the required techniques needed to implement both craft and industrial arts programs and to improve motor coordinative skills. Prerequisite: ED 410.

ED 414 Domestic Arts in Special Education UG

3 credits

(S)

Procedures for teaching practical domestic knowledge such as home management, cooking, sewing, appearance, home nursing, child care and budgeting. Prerequisite: ED 410.

ED 415 Methods and Materials for the Academically
Talented UG

3 credits

(S)

Emphasis on the identification and placement of gifted pupils in our schools and the related program, enrichment activities, creative development, method and materials, modified curriculum, administration, motivation and treatment of underachievement. Prerequisite: PY 200.

ED 416 Teaching the Slow Learner UG

3 credits

(S)

Emphasis is placed upon identification curriculum, methods of instruction, proper social and vocational adjustment, and concrete presentation of all academic activity for this type of pupil. Prerequisite: ED 410.

ED 417 Teaching Emotionally Disturbed Children UG

3 credits

(S)

Classroom facilities including carrels, learning experiences, administrative functions, educational materials and the administration of the program will be emphasized. Prerequisite: PY 200 and ED 410.

ED 418 Etiology, Dynamics and Treatment of Emotionally Disturbed Children UG

3 credits

(S)

The causes, characteristics, behavioral aspects and accepted syndromes for identification will be emphasized as well as the psychiatric procedures involved. Prerequisite: PY 200 and ED 410.

- ED 419 Occupational Training Programs in Special Education UG (S)** *3 credits*
Workstudy programs for mentally retarded students will be carefully studied for the purpose of the most effective work/vocational placement and follow-up to insure gainful employment. Legal information and labor rights will be presented. Prerequisite: PY 200 and ED 410.
- ED 420 Educational Measurement UG** *3 credits*
Procedures for developing and evaluating classroom teacher-made tests and a survey of standardized testing practices used in the K-12 program. Credits earned in this course may not be used in partial fulfillment of requirements for any program leading to the degree of Master of Education. Prerequisite: PY 200.
- ED 426 The Trainable Mentally Retarded UG (S)** *3 credits*
The complete responsibility of the school, the community and the residential school in regard to identification, training, physical facilities, and instructional techniques will receive consideration. Prerequisite: PY 200 and ED 410.
- ED 427 Guidance in Special Education UG (S)** *3 credits*
The complete diagnostic process, understanding of case summary, educational guidance throughout the school attendance, and vocational guidance. Prerequisite: PY 200 and ED 410.
- ED 428 Rehabilitation and Special Education UG (S)** *3 credits*
Review of all of procedures and processes of helping the mentally retarded, the physically handicapped, the emotionally disturbed, and the multi-handicapped through the medium of rehabilitation services. Prerequisite: PY 200 and ED 410.
- ED 429 Teaching the Physically Handicapped UG (S)** *3 credits*
A comprehensive treatment of the education, therapy, and guidance of physically handicapped children within the schools with a thorough understanding of their adjustment problems. Prerequisite: ED 410.
- ED 430 Principles and Practices in Guidance UG (G)** *3 credits*
The philosophy and historical development of the guidance movement; the need for guidance; the nature of guidance services in the schools for today; the personnel, facilities, and procedures involved; and the role of the classroom teacher in guidance. Prerequisite: PY 200.

**ED 491 Supervised Teaching in the Public
Schools-Special Education U**

6 credits

Continuous supervised experiences under regular special class conditions will be provided. Experience will be gained in different teaching techniques, individual differences, and classroom management. Supervision by the cooperating teacher and the college supervisor should culminate in the assumption of at least one week of full-time responsibility. Prerequisite: 24 graduate credits of approved degree work or permission of the Director of the Division of Professional Education.

**ED 500 Research and Evaluation G
(G, LD, R, A, S)**

3 credits

Emphasis on the evaluation of completed research and the carrying out of a research study utilizing the criteria developed during class presentations. Prerequisite: ED 420.

ED 502 Research G

credit to be arranged

Original research undertaken by an individual in the field of educational services. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

ED 503 Directed Study G

credit to be arranged

Directed study in the field of educational services. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

**ED 513 Seminar in Special Education G
(S)**

3 credits

A careful research to help determine changes in this field so that improved services and techniques might be realized. Prerequisite: At least 24 credits toward the M.Ed. in Special Education.

**ED 515 Teacher Orientation to Learning Disabilities G
(S, LD)**

3 credits

Acquaint in-service teachers with current statistics concerning children with learning disabilities and encourage appreciation of the spectrum of difficulties these children have. Diagnosis and evaluation will be studied in conjunction with the fields of perceptual handicaps, physiology, neurology, and psychology. Prerequisite: PY 200, ED 330, and ED 410.

- ED 516 Development of Visual and Perceptual Skills in Young Children G (LD)** *3 credits*
Development of vision as part of a sensory-action system with stress on the interaction between the functional and clinical aspects of vision care in the growing child. Considerable time devoted to the recognition of perceptual skills and classroom problems involved in learning and learning difficulties. Prerequisite: ED 515 or permission of the Instructor.
- ED 517 Development of Thought and Language in Young Children G (LD)** *3 credits*
Basic principles of child growth and development. Language development in the whole child will be complemented and supplemented with a concentration on language disorders, testing and remediation. Prerequisite: ED 515 or permission of the Instructor.
- ED 518 Workshop in Learning Disabilities G (LD)** *6 credits*
Structuring of materials based on methodology in teaching perceptually handicapped children, and the experiential tutoring with children previously diagnosed by clinics or recommended upon completion of the SPEP forms. Prerequisite: ED 515 or permission of the Instructor.
- ED 519 Interpretation of Diagnostic Techniques (LD)** *3 credits*
Methods of differential diagnosis in learning disabilities with emphasis on interpretation of standardized test instruments and the development of profiles of learning style. Prerequisite: ED 420.
- ED 522 Measurement of Intelligence — Binet G (G, LD, R)** *3 credits*
Training for administration, scoring and interpretation of the Binet Intelligence Scale. A test kit is a necessity. Prerequisite: PY 200 and ED 420.
- ED 524 Measurement of Intelligence — WPPSI, Weis & Wisc G (G, LD, R)** *3 credits*
Training for administration, scoring and interpretation of the Wechsler Intelligence Scales. Test kits are necessary. Prerequisite: PY 200 and ED 420.
- ED 530 Counseling Theory and Practice G (G)** *3 credits*
Emphasis will be placed on the principles of counseling and the application of the basic techniques to the counseling process. The roles of both guidance personnel and teachers will be stressed. Case studies will be used and situational problems discussed. Prerequisite: ED 430.

- ED 531 Organization and Administration of Guidance Programs G** *3 credits*
(G)
Procedures for creating and operating a program of guidance services in the public school including basic principles and practices and how guidance services and activities can be adapted, organized, and administered. The course will give special attention to immediate NDEA Act applications. Prerequisite: ED 430.
- ED 532 Practicum in Guidance and Counseling G** *3 credits*
(G)
A supervised counseling experience extending approximately one semester. Students participating in the practicum will be placed according to their area of concentration — elementary or secondary school guidance. Prerequisite: ED 530.
- ED 533 Psychological Tests in Guidance G** *3 credits*
(G)
Introduction of the school counselor to the basic principles of psychological testing and the most commonly used instruments for assessing intelligence achievement, aptitude, interest and personality. Prerequisite: ED 420 and ED 430.
- ED 534 Occupational and Educational Information G** *3 credits*
(G)
Use of educational and occupational information in counseling and classroom situations. Information will be considered and collected. Prerequisite: ED 430.
- ED 535 Principles and Practices in Placement G** *3 credits*
(G)
Emphasis will be placed on two areas:
1. A review of career development theory.
2. Internal and external placement programs and techniques. Prerequisite: ED 430.
- ED 540 Improving Reading Instruction G** *3 credits*
(LD, R)
A consideration of how the teaching of reading can be improved through a thorough analysis of pupils' instructional needs, differentiated instruction in all essential skills, and a planned program to encourage voluntary reading. Current approaches and reading materials will be examined. The implications of differences among pupils in language and perceptual development, cognitive development and learning rate, and attitudes and values will be discussed. Prerequisite: ED 330, ED 331, or an equivalent basic course in the teaching of reading.
- ED 541 Diagnosis and Correction of Reading Difficulties I UG** *3 credits*
(LD, R)
Designed to prepare both elementary and secondary remedial reading teachers. Part I of this course will emphasize the identification of specific instructional needs, development of remedial plans, and provision of highly motivated instruction to overcome indicated weaknesses. Prerequisite: ED 540 or permission of the Instructor.

and group. A core course for all M.Ed. programs and a prerequisite for courses in school administration. Prerequisite: ED 380, or ED 382, or ED 480, or permission of the Instructor.

ED 561 Elementary School Administration G 3 credits

(A)

The application of the general principles of school administration to the specific problems of the elementary school. Emphasis on the areas of elementary program, plant, services, pupil control and accounting, personnel and public relations. Prerequisite: ED 560.

ED 562 Secondary School Administration G 3 credits

(A)

The application of the general principles of school administration to the specific problems of the secondary school. Emphasis on the areas of secondary program, pupil administration, plant and facilities, personnel and public relations. Prerequisite: ED 560.

ED 563 Personnel Administration in Public Schools G 3 credits

(A)

The nature, development, and importance of personnel administration and the general principles, preparation and procedures for its implementation. Special topics will include selection, orientation, assignment, supervision, rating and the establishment of the type of morale essential for the most effective teaching-learning atmosphere. Prerequisite: ED 560.

ED 564 Public School Supervision G 3 credits

(A)

The philosophy and function of supervision and the roles of the various staff members responsible for supervision in a modern public school. Prerequisite: ED 560.

ED 565 School Finance and Business Administration G 3 credits

(A)

The financial support for public schools from local, state, and federal governments. School budgets, accounting, and purchasing procedures, distribution of supplies and services, transportation, food service, management and maintenance of the school plant. Prerequisite: ED 560.

ED 566 School Plant Planning and Administration G 3 credits

(A)

For the specialist in school administration who may ultimately go on to school district administration as an assistant superintendent, business manager, director of buildings and grounds or superintendent. In depth coordination of the many factors involved in planning, construction, maintaining and administering the modern school plant. Prerequisite: ED 560.

ED 567 Administration of the School Activity Program G 3 credits

(A)

The nature and function of student activities, the management of the activity program (with an administrative emphasis) and an analysis of the types of student activities. Prerequisite: ED 210, or ED 443, or ED 560.

ED 568 Seminar in Problems of School Administration G 3 credits
(A)

Study and analysis of current problems and issues in elementary and secondary school administration. Student solutions to these problems will be presented to the class as a whole. Prerequisite: Twenty-four (24) credit hours must be completed toward the Master's Degree in School Administration including five other Administration courses. Consent of major adviser is also necessary.

ED 569 Legal Aspects of School Administration G 3 credits
(A)

Legal rights, duties and liabilities of school personnel in general relationship to the school committee in Massachusetts. Intended for administrators, prospective administrators, and classroom teachers interested in the legal aspects of school committees, school property, teaching contracts, tenure, prevention of injury and accidents to students, relationships with parents, and a general survey of educational law cases at the local, state, and national level. Prerequisite: ED 560.

ED 570 Federal Assistance to American Education G 3 credits
(A)

The goals, content, federal priorities, and evaluation of federal-aid-to-education programs will be studied with particular emphasis on implications to schoolmen. Various titles of the Elementary and Secondary Education Act of 1965 and its subsequent revisions and amendments. Prerequisite: ED 560.

ED 571 Introduction to Theory and Understanding of Group Interaction G 3 credits
(A)

Directed to teachers and administrators who wish to be more effective in working with groups. Consideration will be given to the group process and staff development with emphasis on the human relations aspects of interpersonal relationships. Group activities will be based upon improving understanding and utilization of skills in such areas as communication, cooperation, problem-solving, conflict management and decision making. Prerequisite: ED 560.

ED 573 Innovative Administration Practices in Modern Education G 3 credits
(A)

A study in depth of six or more topics that have current impact on school organization and administration. The innovations studied, selected in part by the class itself, would vary from year to year, and might include such areas as Differentiated Staffing, Rescheduled School Year, PPBS and Accountability, Computer-assisted Instruction, Negotiations, Open Campus or Open Education. Reading, research group work, problem solving student-led class presentations. Prerequisite: ED 560.

**ED 574 Organization and Administration of the
Middle School G****3 credits****(A)**

The application of the general principles of school administration to the specific problems of the Middle School, grades five through eight. Emphasis on the areas of Middle School program, pupil administration, plant and facilities, personnel, and public relations. Prerequisite: ED 560.

ED 576 Internship in School Administration G**3 to 6 credits****(A)**

Assumption of administrative responsibility in an actual school situation under the supervision of administration from the school concerned, and staff members from the college. Prerequisite: ED 560.

DEPARTMENT OF ELEMENTARY EDUCATION

Chairman: Associate Professor Dickinson

Professor: MacCurdy

Associate Professors: Nadal, Wood

Assistant Professors: Kent, Phillips, Thornell

Instructor: Wolpert

Orientation Meetings for Applicants

Two meetings have been scheduled in November and two in April for those who may be interested in either of the degree programs outlined below. Potential applicants should plan to attend one of these meetings prior to the completion of all admission requirements. At the close of each session, individual interviews will be scheduled for those who elect to have them. Please consult the Calendar of the Graduate School for the time and place of these meetings.

Master of Education in Elementary Education

The Department of Elementary Education offers a program leading to the degree of Master of Education in Elementary Education. This program is designed for teachers and future teachers of grades kindergarten through six. It is flexible enough to meet the needs of those with a background in the liberal arts as well as those who have an undergraduate major in elementary education.

In addition to meeting general degree requirements, the student must satisfactorily complete ED 450 and ED 554 as well as the departmental concentration requirement. The latter is met through the election of courses appropriate to the degree program.

Master of Education in Elementary School Mathematics

The Department in conjunction with the Department of Mathematics offers a program leading to the degree of Master of Education in Elementary School Mathematics. This program is designed for teachers and future teachers of elementary mathematics. In addition to meeting general degree requirements, the student must satisfactorily complete: ED 350, ED 351, ED 550, MA 353 and MA 354 as well as the departmental

concentration requirement. The latter is met through electing education and/or mathematics courses appropriate to the degree program.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

ED 330 Teaching of Reading in the Elementary School UG 3 credits

A consideration of how reading instruction is initiated, how basic reading abilities are developed, and how growth in voluntary reading is encouraged. The essentials of an effective developmental reading program will be examined with attention to organizing reading groups and evaluating progress. Prerequisite: PY 200.

ED 340 Methods and Materials in Elementary Language Arts UG 3 credits

Stress on the new language-focused approach to English and the modern concepts of English grammar and usage. Creative strategies and ideas in teaching the skills and abilities of listening, speaking, and writing. Prerequisite: PY 200.

ED 350 Methods and Materials in Elementary Mathematics UG 3 credits

Acquaintance with the purpose and content of the contemporary elementary school mathematics curriculum. A wide variety of effective teaching procedures and instructional materials designed to meet the varying abilities within the elementary school classroom. Prerequisite: PY 200 and MA 107.

ED 351 Improving Mathematical Instruction in the Elementary School UG 3 credits

Appraisal of current mathematics programs, evaluation of individual pupils with a class, consideration of current instructional procedures and materials designed to provide for individual differences. Prerequisite: ED 350.

ED 360 Methods and Materials in Elementary Music UG 3 credits

The music program in the elementary grades including objectives, curriculum, personnel, pupil characteristics, meeting of individual differences, rhythmic activities, music reading and listening, creative teaching and general procedures, equipment and materials.

ED 362 Methods and Materials in Elementary Art UG 3 credits

The objectives of art education, role of the classroom teacher, developmental stages in the creative growth of children; materials, processes, tools and teaching procedures which will foster this growth at the various grade levels; correlation of art with other subject fields; and evaluation of student progress.

ED 370 Kindergarten Theory and Methods UG 3 credits

The Philosophy of modern kindergarten education including exploration of emerging theories and new approaches. Developmental characteristics and learning styles of the young child are studied and related to initial school experiences designed to foster maximum growth. Curriculum methods and materials are examined and evaluated. Opportunities will be provided to observe the kindergarten child in the classroom. Prerequisite: PY 200.

ED 371 The Nursery School UG 3 credits

Current emphasis on the schooling of young children in a nursery school setting is the direction of this course. The psychological, physical, and emotional norms of this age group are explored. Current materials available to the teacher are examined. Recommended for those interested in the very young-nursery school and kindergarten teachers. Prerequisite: PY 200.

ED 450 Elementary School Curriculum UG 3 credits

Roles of the administrator, the teacher, the parent and the child in the development of the changing curriculum in the elementary school. Use of action research, in-service training, innovations for curriculum improvement, school organizations, team teaching, the non-graded school, individualized instruction, the revaluation of objectives, and democratic values. Prerequisite: PY 200.

**ED 452 Methods and Materials in Elementary
Education UG 3 credits**

Effective ways of vitalizing the teaching-learning process through teacher-pupil planning, participation and evaluation. Emphasis on creative teaching and the individualized approach. Resource persons, lectures, reports, discussions and displays of materials will be used. Prerequisite: PY 200.

**ED 454 Drug Education for the Elementary School
Teacher UG 3 credits**

Prevention of drug abuse in the chief purpose of the course. How to acquaint elementary teachers with the causes and cure of the problem. A review of current methods and materials in drug education will be featured.

ED 460 Methods and Materials in Elementary Science UG 3 credits

Goals of elementary school science instruction and the methods of attaining them through "newer" science programs, problem-solving, experimentation, and varied instructional media are examined. Prerequisite: PY 200.

**ED 470 Methods and Materials in Elementary Social
Studies UG 3 credits**

Emphasis is placed on current trends including objectives, curriculum, creative pupil-teacher planning, teaching techniques involving extensive use of instructional media and study tours of New England. Prerequisite: PY 200.

ED 474 Methods and Materials in Primary Education UG 3 credits

Emphasis on insight into ways of teaching Primary-Grade children, taking into consideration the basic philosophy of their education and promoting an understanding that each child is a unique individual. Stress on effective organization and management, what to teach, how to teach, the importance of skill development, the necessity for drill, and the use of practical creative techniques. Prerequisite: PY 200.

**ED 492 Supervised Teaching in the Public
 Schools-Elementary U 6 credits**

Supervised experiences in classroom activities. Experience is gained in: teaching techniques, individual differences, and classroom management. Students are expected to carry a teaching load that averages 50% of the classroom teacher's assignment. Prerequisite: 24 graduate credits of approved degree work or permission of the Director of the Division of Professional Education.

ED 502 Research G credit to be arranged

Original research undertaken by an individual in the field of elementary education. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

ED 503 Directed Study G credit to be arranged

Directed study in the field of elementary education. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

**ED 550 Practicum in the Elementary School
 Mathematics Program G 3-6 credits**

Students accepted will pursue an individualized program of advanced study and research, focused on a substantive topic pertaining to the elementary school mathematics program, and eventuating in an acceptable documented report. Periodic meetings will be scheduled by the Instructor. Each student's program must be approved by the Instructor and the department chairman. Prerequisite: completion of, or enrollment in, all other required courses in the degree program.

**ED 551 Discovering Science—A Survey of Current Elementary School
 Science Programs G 3 credits**

The inductive programs for elementary science: Elementary Science Study, Minnesota Mathematics and Science Teaching Project, Science—A Process Approach, and the Science Curriculum Improvement Study. Their philosophy, psychology, materials, and methods of implementation. Prerequisite: ED 460, ED 462 or permission of the Instructor.

ED 554 Seminar in Elementary Education G

3 credits

An integration of formal study, current research and personal experience. Each student will make an extensive study of a significant problem in elementary teaching. Prerequisite: 24 approved G credits with a minimum of 12 credits in elementary education.

**DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION
FOR MEN**

Chairman: Professor Lehmann

Associate Professors: Knudson, Swenson

Assistant Professor: Mazzaferro

Instructors: Braun, Yeskewicz

**DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION
FOR WOMEN**

Chairman: Professor Comeau

Associate Professors: Phillips, Thornburg

Assistant Professors: Coakley, Gross, Hogg, Krasinski, Smith, Tufts, Wells

Instructors: Hurst, Rugen, Schopp, Wolfgram, Yeaman

The Departments of Health and Physical Education for Men and Women jointly offer programs leading to the degrees of Master of Education in Health Education and Master of Science in Physical Education.

Master of Education in Health Education

This program is designed for persons interested in health education. Course prerequisites for admission to the degree program are: health education, 6 credits; psychology, 6 credits; philosophy of education, 3 credits. In addition to meeting general degree requirements, the student must satisfactorily complete:

1. HE 465, HE 495 and HE 502.
2. At least two of the following: HE 385, HE 475, HE 485, HE 499.

The remainder of the student's program (which is subject to the approval of the adviser) may be selected according to the interest and need of the student. All electives should be appropriate to the degree program.

Master of Science in Physical Education

This program is designed to prepare qualified students for teaching, research, and further graduate study in physical education. It is based upon a foundation in physical education, and endeavors to explore new areas in the field as well as to expand upon those areas previously studied at the undergraduate level.

An undergraduate major in physical education is required for admission to the program.

Applicants must have an interview with the Chairman of the Department. No application will be considered unless this requirement has been met.

Students enrolled in the program leading to the degree of Master of Science in Physical Education must satisfactorily complete the following:

Required courses:

- PE 500 Techniques of Research in Physical Education
- PE 502 Research (Thesis)
- PE 505 Interdisciplinary Foundations of Physical Education
- PE 506 Philosophy and Principles of Physical Education
- MA ... A course in statistics

At least two of the following:

- PE 470 Sociology of Sport
- PE 484 Physical Education for Exceptional Children
- PE 485 Administration of Physical Education
- PE 507 The Child and His Movement Behavior
- PE 508 Motor Learning
- PE 509 Mechanical Analysis of Movement
- PE 510 Concepts of Curriculum Development

Electives:

A minimum of three appropriate courses approved by the adviser prior to registration.

All students must satisfactorily complete a minimum of thirty graduate credits, a written and/or oral comprehensive examination, and a thesis.

Course Offerings

HE 471 Nutritional Education UG 3 credits

Nutrition, and the relation of nutrition to cultural patterns, dental health, and total health and fitness. The New England Dairy and Food Council will assist in planning the course outline, will provide approved films, and suggest speakers.

HE 472 Methods in Health Education UG 3 credits

Advanced course for health specialists, elementary school classroom teachers and physical educators. Emphasis will be placed upon selection of health content and the latest and most effective methods and techniques in teaching health. Prerequisite: 3 credits in health.

HE 473 Sex and Family Living Education UG 3 credits

Emphasis will be on objectives, curriculum content, methods and techniques of teaching in this area. The role of the school and community regarding education for family living will be discussed. A view of the entire educational curricula and its aims will be studied as it relates to education for family living.

HE 474 Community Health Education UG 3 credits

The history and development of public health programs, the relationships of health departments—local, state, and federal—public and private agencies, and the school health program. Problems and principles of the community health programs based on local needs. Designed for classroom teachers, health specialists, and others interested in community health. Prerequisite: a course in personal health education.

HE 502 Research G *credit to be arranged*

Original research undertaken by an individual in the field of health education. The student's investigations will culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a program leading to the degree of Master of Education in Health Education and approval of topic and outline by the student's adviser and the department chairman.

HE 503 Directed Study G *Credit to be arranged*

Directed study in the field of health education. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a program leading to the degree of Master of Education in Health Education and completion of at least 15 graduate credits approved by the student's adviser.

HE 504 School Health Program G *3 credits*

This course is designed to acquaint the elementary classroom teacher with the areas of the school health program: health services, health education and healthful school living. Emphasis will be placed on the objectives and goals of health education within and throughout the total school curriculum, organization of the school health services, and basic issues and problems in school health. Prerequisite: 6 credits in health.

HE 505 Health Problems G *3 credits*

Current health problems related to the school and community will be presented. Topics will be based on needs and interests of class participants. The school's responsibility for education in these areas will be discussed. Prerequisite: 6 credits in health.

PE 470 Sociology of Sport UG *3 credits*

Examination and analysis of the types of forces at work in American society and how they relate to sports. Among the topics to be included are the influences of our cultural heritage, philosophy of education, politics, religion, economy, ethnics, mass media, and internationalism. Lectures, readings, class discussions, and written assignments will be directed toward enhancing the individual's understanding of the values of sport in our society yesterday, today, and tomorrow. Prerequisite: 3 credits in sociology.

PE 471 Current Issues in Physical Education UG *3 credits*

Study of trends and forces in education as they effect physical education: expansion of knowledge, philosophy, purposes, content, and relevance, as well as the implications for curriculum, higher education, and research in physical education. Prerequisite: 6 credits in physical education.

- PE 472 Measurement and Evaluation in Physical Education UG** **3 credits**
 The construction and use of written tests, skill tests, and other measurement devices in physical education; methods of administration and use of data. Prerequisite: MA 110 or its equivalent.
- PE 473 Foundations of Physical Education UG** **3 credits**
 Scientific foundations of physical education; the objectives and how they are best achieved; the philosophy of physical education as a part of total education; the relationship of physical education to health, recreation, camping, and outdoor education. For students lacking an undergraduate major in physical education. Prerequisite: permission of the Instructor.
- PE 474 Teaching and Calling the Modern Square Dance UG** **3 credits**
 Make-up and place of modern square dance in the physical education curriculum. Basics included in the modern square dance will be presented in progression. The techniques of teaching will be emphasized as students are taught to perform these fundamentals. The method of learning to call individual basics will be stressed and emphasis placed on the mechanics and function of each.
- PE 475 Organization of Girls' Intramural and Extramural Activities UG** **3 credits**
 The construction of a balanced program of cocurricular activities based upon sound educational objectives implemented with the current standards and guidelines established for the junior and senior high school girl.
- PE 476 Physical Education for the Elementary Classroom Teacher UG** **3 credits**
 Physical education activities and skills throughout the elementary grades. Emphasis will be on preparation and teaching techniques for the classroom teacher, specialist, and supervisor. A laboratory experience will be a required part of the course.
- PE 477 Introduction to Recreation UG** **3 credits**
 The history of recreation from colonial days to the present. Particular emphasis is placed on the cultural views and their relationship to recreation. The various types of recreation presently seen and the impact of leisure time on the future will also be discussed.
- PE 479 Problems in Physical Education and Athletics UG** **3 credits**
 The recognition, discussion, and systematic analysis of controversial issues and problems. Topics studied are: optimum use of facilities, ethical practices, finance relationships with non-school programs, interscholastic athletic competition below high school level, youth fitness, crowd control, injury prevention, program evaluation, and community organization for health, physical education, and recreation.
- PE 480 Care and Prevention of Athletic Injuries UG** **3 credits**
 Methods of prevention, correction, care and treatment of athletic injuries. Training and conditioning programs will be studied. Class time will be devoted to lectures, discussions, and practical work. Taping and use of physical therapy equipment will be covered in the course.

- PE 481 Organization and Administration of School Athletics UG** **3 credits**
Athletic policies and regulations on the local and state levels, administrative plans, contest management, the purchase and care of equipment, athletic awards, finance and budget, athletic facilities, scheduling, public relations, the intramural program, and trends in interscholastic athletics.
- PE 482 Public Relations in Physical Education UG** **3 credits**
The study of a public relations philosophy, as well as specific and practical techniques. Planning and preparation of annual reports, speeches, brochures, displays, demonstrations and press releases. Course projects are planned to help upgrade the public relations programs in the departments and schools represented.
- PE 483 Current Trends in Dance and Sport UG** **3 credits**
Advanced techniques and methods of teaching selected sports, gymnastics, and dance. Strategy in game play and competitive gymnastics will be included. Both theoretical and practical experiences provided.
- PE 484 Physical Education for Exceptional Children UG** **3 credits**
Adaptation of physical education activities to meet the varying needs of exceptional children. Nearby schools and institutions provide opportunities for practical experience.
- PE 487 Programs in Recreation UG** **3 credits**
The fundamental aspects of program planning in recreation. The programs of various agencies, both public and private, will be discussed. Items given special attention are: Senior Citizens Programs, Physically and Mentally Retarded Programs and Pre-primary Programs.
- PE 500 Techniques of Research in Physical Education G** **3 credits**
Methods and techniques of research and their application to physical education with emphasis on problem selection and construction of a research project. Prerequisite: statistics and 12 credits in physical education.
- PE 502 Research G** **credit to be arranged**
Original research undertaken by an individual in the field of physical education. The student's investigations will culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.S. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a program leading to the degree of Master of Science in Physical Education and approval of topic and outline by the student's adviser and the department chairman.
- PE 503 Directed Study G** **credit to be arranged**
Directed study in the field of physical education. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.S. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration.

Prerequisites: Acceptance in a program leading to the degree of Master of Science in Physical Education and completion of at least 15 graduate credits approved by the student's adviser.

- PE 505 Interdisciplinary Foundations of Physical Education G** *3 credits*
Analysis and synthesis of biological, sociological, and psychological aspects of man with specific application to teaching and research in physical education. Prerequisites: 3 credits in each of the following: sociology, psychology, and physiology
- PE 506 Philosophy and Principles of Physical Education G** *3 credits*
Philosophical inquiry into the discipline of physical education including a study of trends and forces in education as they affect the field. Prerequisite: 6 credits in physical education.
- PE 507 The Child and His Movement Behavior G** *3 credits*
Current concepts and trends related to movement experiences of children with emphasis on developmental movement, and learning. Prerequisite: 12 credits in physical education or permission of the Instructor.
- PE 508 Motor Learning G** *3 credits*
Integration of biological and psychological concepts in the acquisition of motor skills including environmental conditions, developmental factors and learning theories. Prerequisite: 3 credits in psychology.
- PE 509 Mechanical Analysis of Movement G** *3 credits*
Scientific principles applied to human motion with emphasis on the analysis of human movement for the purpose of improving teaching and coaching techniques. Prerequisite: a course in physics or kinesiology.
- PE 510 Concepts of Curriculum Development G** *3 credits*
Current educational trends and theories relative to physical education and the development of curricular models, with a focus on the needs of today's society. Prerequisite: 9 credits in physical education or permission of the Instructor.
- PE 511 Professional Literature of Physical Education G** *3 credits*
Survey and evaluation of literature in the field. Prerequisite: permission of the Instructor.
- PE 512 Administration of Physical Education G** *3 credits*
Application of administrative principles to the physical education program. Prerequisite: 12 credits in physical education or permission of the Instructor.

DEPARTMENT OF INSTRUCTIONAL MEDIA

Chairman: Professor Rosen
Assistant Professor: Lee
Instructor: Ward

The Department of Instructional Media offers a program leading to the degree of Master of Education in Instructional Media. This program is designed for present and future media specialists.

In addition to meeting general degree requirements, the student must satisfactorily complete: IM 310, IM 452, IM 453, IM 456, IM 460 and IM 464, as well as the departmental concentration requirement. The latter is met through the election of a course appropriate to the degree program.

The following **undergraduate** course is a prerequisite for certain graduate courses offered by the department. Additional undergraduate prerequisites in other departments may be required. No graduate credits may be earned in these courses.

3 credits

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

3 credits

Introduction to instructional media and technology. Instruction in and application of still pictures, slides, filmstrips, recordings, radio, television, three-dimensional materials, field trips, flannel boards, chalk boards, and specialized teaching machines. Sources of teaching aids and supplementary materials accompanies laboratory procedures. Three periods weekly. Prerequisite: permission of the Instructor.

3 credits

The course is designed to give the student experience in putting various communications principles into effect in the development of messages designed to solve particular instructional problems. The last half of the course will be primarily student oriented. Each student will be required to design a minimessage based on at least one principle cited in the course. Prerequisite: IM 310 or permission of the Instructor.

3 credits

Directed study course. Development of a course of study in the student's field of concentration coordinated with instructional media and technology. Prerequisite: IM 310.

credits to be arranged

Systematic review of literature and research, techniques, and technology in instructional media. Reports for group discussion and analysis. Prerequisite: IM 420, IM 452, and IM 460.

- IM 452 Science of Photography in Education UG** *3 credits*
Basic philosophy, educational planning, and the techniques of preparation of photographic instructional materials. Preparation of color and black and white slides, stills, filmstrips, transparencies for overhead projection. Emphasis upon photography and darkroom techniques. Prerequisite: IM 310, IM 311, or permission of the Instructor.
- IM 453 School Public Relations UG** *3 credits*
The necessity for a well-informed public to foster good school public relations. All necessary media will be discussed; radio, television, newspapers, magazines, school publications, teacher-parent and administrator-teacher-parent relationships. Prerequisite: permission of the Instructor.
- IM 454 Script Writing Techniques for Radio and Television UG** *3 credits*
This course is designed to give the student skills in writing for Radio and TV. Developing a sense of the dramatic and the understanding of the science of human psychology will also be studied. Prerequisite: IM 310, IM 452, and IM 456.
- IM 456 Radio and TV Studio Operation and Control UG** *3 credits*
The student will learn all of the technical data necessary to direct TV programs and to operate a radio station. The student will be prepared to take the examination for 1st, 2nd, or 3rd class license. Prerequisite: IM 450, IM 452, and IM 460.
- IM 457 Advanced Photography Techniques UG** *3 credits*
Advanced theory of photography and the preparation of projected photographic materials; slides, stills, filmstrips, motion pictures, and overhead transparencies. Advanced techniques of darkroom usage and salon printing. Prerequisite: IM 452.
- IM 458 Radio and TV Production UG** *3 credits*
Designed to make the student proficient in the production of radio and TV programming, with stress upon being able to make, obtain, and set up necessary props, backgrounds, trick camera shots and sound effects. Prerequisite: IM 310, IM 452, IM 453, IM 456, and IM 460.
- IM 460 Graphic Arts in Instructional Media UG** *3 credits*
Instruction in graphic arts pertaining to new technology in education. Mechanical and hand lettering and lay-out. Preparation of materials by color-lift, thermofax, and tecnifax techniques. Basics for photocopying including 2" x 2" slides. Prerequisite: IM 452 or consent of Instructor.
- IM 464 Management of an Instructional Media Department UG** *3 credits*
All phases of operating an Instructional Media Department: budgeting, purchasing, staffing, services, analysis of materials and equipment. Prerequisite: IM 310, IM 452, IM 453, IM 456, and IM 460.
- IM 466 Cinematography I UG** *3 credits*
Basic production of 8mm, super 8 and 16mm motion picture films. Basic techniques involved in the production of motion picture films used in education. Prerequisite: IM 452. Not offered in 1972-73.

IM 468 Advanced Cinematography UG 3-6 credits

Advanced techniques of film production in all of its technical phases, including production, design, editing and sound synchronization for motion pictures in education. Prerequisite: IM 452, IM 466. Not offered in 1972-73.

IM 502 Research G credit to be arranged

Original research undertaken by an individual in the field of instructional media. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

IM 503 Directed Study G credit to be arranged

Directed study in the field of instructional media. Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

DEPARTMENT OF LIBRARY SCIENCE

Chairman: Associate Professor Bouchard

Assistant Professor: Oakley

Instructors: Lee, Neubauer

The Department of Library Science offers a program leading to the degree of Master of Education in School Librarianship. This program is designed primarily for school librarians; many of the courses, however, are of proven value to educators outside of the library profession.

In addition to meeting general degree requirements, students must satisfactorily complete or have satisfactorily completed prior to acceptance the following courses: LI 310-320, LI 370, LI 430, LI 440, and LI 595.

At least one of the remaining electives must be selected from Library Science courses offered for graduate credit only.

Course Offerings

The following courses may be taken for graduate credit. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

LI 310 Children's Literature UG 3 credits

Reading interests of children from pre-school years through the elementary grades with emphasis on the contribution that reading can make toward the process of growing up; criteria for evaluation and analysis of children's books; types of books

available today, considered in terms of the needs, interests, and abilities of children. Topics covered are history of literature for children; illustrators; folktales; myths; modern fanciful tales; fiction; poetry; books in special fields, such as history, science, travel.

- LI 320 Literature for Young Adults UG** *3 credits*
Survey of literature for the adolescent, designed for junior and senior high school teachers and librarians, including a brief history of the development of this literature, evaluation of publishers, and psychology of the adolescent reader.
- LI 370 Reference Materials and Their Use UG** *3 credits*
Outlines appropriate procedures in various disciplines. Search exercises give practical application of techniques using all the resources of the library.
- LI 430 School Library Administration UG** *3 credits*
Principles and practices in school library administration and service; the role of the library in the school's educational program; pupil instruction in library use; the planning and equipping of the library; and other aspects of library organization. Prerequisite: LI 370, LI 440.
- LI 440 Organization of Library Materials (formerly Cataloguing and Classification) UG** *3 credits*
Emphasis is on the Dewey Decimal classification and Sears Subject headings. Some time is given to the general processing of books. Prerequisite: LI 450, or permission of the Instructor.
- LI 450 An Introduction to the Library, (formerly The School Library, a Survey) UG** *3 credits*
Introduces teachers, administrators, and beginning librarians to the role of the library in education and the expanded services needed to meet the new methods of teaching.
- LI 451 Storytelling UG** *3 credits*
Examination of the literary sources, experience in selection and presentation of stories, and techniques in cultivating appreciation of literature in children from kindergarten through grade 8.
- LI 452 Selection of Library Materials (formerly Media Selection) UG** *3 credits*
Criteria and policies in selection for reader interest and curriculum enrichment, with emphasis on practical applications and appraisal of bibliographic aids and current review practices.
- LI 453, 454 Film Study for Librarians UG** *3 credits for each semester*
History, development, and screen conventions in the library program objectives of the school and community. Emphasis on acquiring analytic and evaluative skills and upon assessing emotional responses. LI 453 Beginnings of the film to 1921. LI 454 The "silent period" completed and the era of the sound film introduced up to the present day.

- LI 464 Use and Organization of Non-print Materials UG 3 credits**
Survey of the standards and innovations in school media programs and exposure and proficiency in the use and organization of non-print materials currently used in libraries. Prerequisite: IM 310, LI 440, or permission of the Instructor.
- LI 502 Research G credit to be arranged**
Original research undertaken by an individual in the field of library science. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.
- LI 503 Directed Study G credit to be arranged**
Directed study in the field of library science. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.
- LI 548 Advanced Cataloguing and Classification G 3 credits**
Gives primary consideration to the Library of Congress classification and subject headings. Some attention will be given to non-book materials. Prerequisite: LI 440.
- LI 553 The History of Libraries G 3 credits**
Form and function of the library as an institution in social and intellectual settings. Included are classical, medieval, and scholarly libraries; the development of modern public and academic libraries, and the school library movement, particularly in Massachusetts.
- LI 555 Literature of Science and Technology G 3 credits**
A continuation of LI 370. Background, trends, and bibliographic control of the natural and physical sciences, pure and applied, including principles of information storage and retrieval. Prerequisite: LI 370.
- LI 556 Literature of the Humanities G 3 credits**
A continuation of LI 370. Background, trends, and bibliographic control in literature, the arts, philosophy, and religion. Prerequisite: LI 370.
- LI 557 Literature of the Social Sciences G 3 credits**
A continuation of LI 370. Background, trends, and bibliographic control in history, political science, education, and the behavioral sciences, including organizations, periodicals, and government publications. Prerequisite: LI 370.
- LI 566 Systems Approach to Libraries (formerly Automation in the Library) G 3 credits**
Survey of developments in information retrieval and other library applications of modern procedures in acquisition, circulation, management, and periodical control. Prerequisite: LI 455 or permission of the Instructor.

organization, administration, curriculum, law, management, individual differences, discipline, guidance and evaluation. Students are asked to gain meaningful experiences through observing, assisting, or tutoring activities within the secondary school environment. Prerequisite: PY 200.

Secondary Education

3 credits each

ED 312 Teaching Social Studies in the Secondary School UG

ED 314 Teaching English in the Secondary School UG

ED 319 Teaching Science in the Secondary School UG

ED 322 Teaching Mathematics in the Secondary School UG

ED 324 Teaching Modern Foreign Language in the Secondary School UG

ED 326 Teaching Speech in the Secondary School UG

The above courses are comparable in purpose and design, differing as application is made to a particular subject field. The main emphasis will be on the establishing of objectives, the choosing of appropriate content, procedures, materials, and the techniques of planning necessary to accomplish the objectives. Other topics will include classroom organization and management, meeting of individual differences, evaluation and reporting of progress, and recent developments in methodology and subject matter. Prerequisite: PY 200.

ED 440 Methods and Materials in Secondary Education UG **3 credits**

Emphasis will be placed on the analysis of the problems of the modern secondary school. Topics will include: the learning process; establishing of objectives; classroom organization and management; meeting individual differences; evaluation; correlation between subject matter fields; and recent developments in methodology and subject matter. Primarily for those interested in gaining certification, undergraduates with no teaching experience, and teachers who have been away from the classroom for many years. Prerequisite: PY 200.

ED 443 Secondary School Curriculum UG **3 credits**

Purposes of the modern secondary school and the curriculum needed to implement them; historical origins, modern development, and future possibilities. Stress is laid on the manner in which the curriculum is built, behavioral objectives, visits to resource centers, assisting in curriculum construction, and methods of curriculum evaluation.

ED 445 The Teacher, Student, and Society UG **3 credits**

Designed for teachers interested in problems of drug abuse, smoking, alcohol, venereal diseases, and sex education, with emphasis on the secondary level. The group dynamic approach and the establishment of rapport with students will be stressed. Prerequisite: PY 200.

ED 490 Supervised Teaching in the Public Schools-Secondary U

6 credits

Students are assigned to appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one quarter in a public school where student teachers are functioning as professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular

classroom teacher's assignment. Full time for one quarter. Prerequisite: 24 graduate credits of approved degree work or permission of the Director of the Division of Professional Education.

ED 505 Historical Foundations of Education G 3 credits

Historical persons, events and movements which have built man's educational establishment from antiquity to current developments in the American school scene. Prerequisite: ED 480.

ED 520 Psychological Foundations of Education G 3 credits

A systematic exploration of the various psychological principles related to teaching and application of these principles in specific classroom situations. Special emphasis on social psychology, dynamics in interpersonal relationships and group processes, motivation, and discipline theory. Prerequisite: PY 200 and one of the following: PY 222, PY 224, or PY 226.

ED 580 Philosophical Foundations of Education G 3 credits

A critical and intensive analysis of selected concepts and beliefs which function as the basis of recent philosophies of education and their relation to current educational practices and policies. Readings from recent philosophers of education. Prerequisite: ED 480.

ED 590 Sociological Foundations of Education G 3 credits

A critical examination of the effects of various social institutions, groups, and situations on educational policy and content. Prerequisite: SO 202 or permission of the Instructor.



DIVISION OF SOCIAL SCIENCES

DIRECTOR: PROFESSOR FIORE

Economics

History

Political Science

DEPARTMENT OF ECONOMICS

Acting Chairman: Professor Fiore

Instructor: Freeman

The Department of Economics does not offer a program leading to the master's degree at this time. Economics courses may be taken, in partial fulfillment of the social sciences concentration for the degree of Master of Education in Secondary Education with a concentration in the social sciences, if approved by the adviser. Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

EC 320 Comparative Economic Systems UG **3 credits**

Analysis of central economic problems faced by nations in organizing economic activity; comparison of theories and institutions and capitalism and liberal socialism.

Prerequisite: EC 400.

EC 420 Principles of Investment UG **3 credits**

Introduction to mechanics of stock market and analysis of various investment media for individual investment portfolios. Prerequisite: EC 400.

EC 502 Research G **credit to be arranged**

Original research undertaken by an individual in the field of economics. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

EC 503 Directed Study G **credit to be arranged**

Directed study in the field of economics. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with

the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the students adviser.

DEPARTMENT OF HISTORY

Chairman: Professor Fiore

Commonwealth Professor: Melville

Professors: Bates, Cole, Herrick, Husek

Associate Professors: Doiron, Keay, Noel, Oien, Rotstein, Spence

Assistant Professors: Christensen, Lythgoe, Myers, O'Connell, Silvia, Wolff

Instructors: Culver, Stonehouse

Master of Arts

The Department of History offers a program leading to the degree of Master of Arts in History, which is designed to prepare qualified students for research, further graduate study and teaching. An undergraduate major in history, or its equivalent, is normally required for admission to this program.

In addition to meeting general degree requirements, the student must complete courses appropriate to his degree program.

Applicants must have an interview with the Chairman of the Department. No application will be considered unless this requirement has been met.

Master of Education

The Department also offers a program leading to the degree of Master of Education in Secondary Education with a concentration in history. This program is designed for teachers and future teachers of history and social science teachers. It also prepares students for further graduate work in history.

In addition to meeting general degree requirements, the student must complete the departmental concentration requirement by electing courses appropriate to his degree program.

Additional Information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following undergraduate courses are prerequisites for certain graduate courses offered by the department. No graduate credits may be earned in these courses.

HI 111 Western Civilization to 1715 U *3 credits*

A historical survey of developments which have molded our culture from ancient times down to the establishment of absolutism.

HI 112 Western Civilization since 1715 U *3 credits*

Continuation of the survey begun in HI 111 down to contemporary times. Prerequisite: HI 111.

HI 221 United States and Constitutions to 1865 U *3 credits*
Development of the nation from the age of exploration to the end of the Civil War.

HI 222 United States History since 1865 U *3 credits*
Continues the study begun in HI 221 down to the present.

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

HI 315 Nineteenth Century Europe UG *3 credits*
From the Congress of Vienna to the First World War. Prerequisite: HI 112.

HI 316 Twentieth Century Europe UG *3 credits*
Particular focus on the background, development and effects of the two world wars. Prerequisite: HI 112.

HI 317 British Political History Since 1603 UG *3 credits*
England and her empire to 1815 with stress on parallel developments in American history, including economic and social factors. Prerequisite: HI 112.

HI 318 British Empire and Commonwealth UG *3 credits*
Political development to the present with emphasis on the rise and fall of the Second Empire. Prerequisite: HI 112.

HI 325 American Labor History UG *3 credits*
The pre-industrial and industrial periods. Emphasis on the reciprocal relationships of workingmen, Negroes, immigrants and urbanization and industrialization. Prerequisite: HI 221-222.

HI 326 The American West UG *3 credits*
The West as place, including Westward Movement, but emphasizing the distinguishing character of the region in its economic, social, political, and intellectual life. Asst. Prof. Lythgoe. Prerequisite: HI 221-222.

HI 327 The American South UG *3 credits*
Sectionalism; its causes and consequences; factors which made the South distinctive; emphasis on race relations, the Civil War and Reconstruction, agrarianism, industrialization. Prerequisites: HI 221-222.

HI 333 Spanish America: The Colonial Period UG *3 credits*
Indigenous peoples of the area; exploration and conquest, institutional development of the empire to the revolts against Spain in the nineteenth century. Prerequisite: HI 112.

HI 334 Spanish America: The National Period UG *3 credits*
From the revolutions against Spain to the present. Concentration on Mexico and two or three other states. Prerequisite: HI 112.

HI 343 The Ancient World: Near East and Greece UG *3 credits*
From prehistoric times to the Hellenistic Empires. Prerequisite: HI 112.

- HI 334 The Ancient World: Rome UG** *3 credits*
From its beginnings to the barbaric invasions. Prerequisite: HI 112.
- HI 353 Historiography UG** *3 credits*
Writings of major historians; evaluation through professional journals and book reviews. Limited to fifteen. Students are expected to elect HI 354.
- HI 354 Study and Writing of History UG** *3 credits*
The techniques of historical research and preparation of papers requiring such techniques. Analysis and evaluation of source materials will be stressed. Prerequisite: HI 353.
- HI 411 History of Russia UG** *4.5 credits*
The early period as background of modern Russia. Emphasis on internal and foreign developments which resulted in the Soviet state. 3 periods weekly for one and one-half semesters. Prerequisite: HI 112.
- HI 413 Contemporary Affairs UG** *3 credits*
National and international problems, using magazines, newspapers, telecasts and recent books. Political, economic, social and scientific developments. Prerequisite: HI 112.
- HI 415 Modern Russia to 1917 UG** *3 credits*
Political, social, and economic factors in the history of Russia from the end of the fifteenth century to the Revolution will be considered. Prerequisite: HI 112.
- HI 416 History of the U.S.S.R. UG** *3 credits*
The political, social, intellectual, and diplomatic development of Russia will be considered. Prerequisite: HI 415 and a survey course in European history.
- HI 419 Intellectual History of Modern Europe UG** *3 credits*
From the Renaissance to the present. Prerequisite: HI 112.
- HI 421 History of Massachusetts UG** *3 credits*
From the days of the Pilgrims and Puritans to the present. In the modern period emphasis is on social, economic, and constitutional history. Prerequisites: HI 221-222.
- HI 423 Social and Intellectual History of the U.S. to 1870 UG** *3 credits*
Economic, social, and cultural development to the end of the Civil War. Prerequisites: HI 221-222.
- HI 424 Social and Intellectual History of the U.S., 1870-1920 UG** *3 credits*
Economic, social, and cultural development from the end of the Civil War to the end of World War I. Prerequisites: HI 221-222.
- HI 425 Social and Intellectual History of the United States to 1914 UG** *4.5 credits*
The economic, social, and cultural developments to the eve of the First World War, with emphasis on the transformation from an agricultural to an industrial society. 3 periods weekly for one and one-half semesters.

- HI 426 History of the American City UG** *3 credits*
Political, architectural, economic, social, cultural, and population factors in the growth and development of American cities since colonial times. Prerequisite: HI 221-222.
- HI 427 American Immigration History UG** *3 credits*
Patterns of migration to the United States with particular emphasis on the nineteenth and twentieth centuries. Prerequisite: HI 221-222.
- HI 428 American Economic History UG** *3 credits*
Economic development of the United States with particular emphasis on the period of industrial development. Prerequisite: HI 221-222.
- HI 430 Europe in the Middle Ages UG** *3 credits*
From the fall of Rome to the Renaissance. Prerequisite: HI 112.
- HI 432 Modern European Imperialism UG** *3 credits*
Africa and Asia considered as contrasting phases of European expansion in the nineteenth and twentieth centuries. Prerequisite: HI 112.
- HI 433 Africa Since 1800 UG** *3 credits*
The impact of Islamic and European cultures on the peoples of Africa; creation of colonial empires. Prerequisite: HI 112.
- HI 434 The French Revolution and the Napoleonic Era UG** *3 credits*
France from the Old Regime to the end of the First Empire. Prerequisite: HI 112.
- HI 436 The Renaissance and the Reformation UG** *3 credits*
Western Europe from the decline of feudal institutions to the emergence of the modern state system, with emphasis on cultural and intellectual affairs. Prerequisite: HI 112.
- HI 437 Modern France UG** *3 credits*
From the Revolution of 1789 to the present. Prerequisite: HI 112.
- HI 441 American Negro History UG** *3 credits*
From the colonial period to the present. Prerequisites: HI 221-222.
- HI 452 Seminar in History UG** *3 credits*
A seminar in United States, European, or Latin American history. The number of students in each one is limited. Prerequisite: Admission is subject to the consent of the Departmental Chairman and the Instructor.
- HI 455 Nationalism in Central and Southern Europe UG** *2 credits*
The aspirations of subject peoples and presentday tensions; the nineteenth and twentieth centuries. 4 periods weekly for one quarter.
- HI 456 History of Brazil UG** *2 credits*
4 periods weekly for one quarter.
- HI 457 Historical Museum Management UG** *2 credits*
4 periods weekly for one quarter.
- HI 461 History of East Asia UG** *4.5 credits*
Emphasis on China and Japan in the nineteenth century. 3 periods weekly for one and one-half semesters.

- HI 463 History of East Asia UG** *3 credits*
Emphasis on China and Japan in the nineteenth and twentieth centuries. Prerequisite: HI 112.
- HI 481 United States Foreign Relations to 1900 UG** *3 credits*
From the American Revolution to 1900. Prerequisites: HI 221-222.
- HI 482 United States Foreign Relations since 1900 UG** *3 credits*
Prerequisites: HI 221-222.
- HI 483 United States History: Progressive Era UG** *3 credits*
The rise of the Progressive movement in American history to the early 1920's as reflected in politics, government, and the social and intellectual life of the era. Prerequisites: HI 221-222.
- HI 484 Recent American History UG** *3 credits*
Development of the modern America through the isolationism and boom of the 1920's, the Great Depression, the New Deal, World War II, and the role of the United States in the post-war world will be considered. Prerequisites: HI 221-222.
- HI 485 United States History: The Civil War UG** *3 credits*
Background and causes of the Civil War, the military and naval aspects, Civil War music, art, and literature, diplomacy of the Civil War, the home front in the war, the plans for reconstruction, and military reconstruction. Lectures will be supplemented by slides, motion pictures, and recordings. Prerequisites: HI 221-222.
- HI 487 The American Revolution 1763-1787 UG** *3 credits*
Background and causes of the American Revolution, the military, social, political, and diplomatic aspects of the Revolution. The government under the Articles of Confederation, and the problems engendered by the attainment of political independence. Prerequisites: HI 221-222.
- HI 488 United States History: The Colonial Period
1607-1763 UG** *3 credits*
The settlement and growth of the English colonies in America, England's colonial policies, economic and institutional development in the provincial period, the wars with the Indians, the rivalry with the French in America. Prerequisites: HI 221-222.
- HI 489 United States History: The Early National
Period UG** *3 credits*
The course of United States history from the establishment of the republic to the election of Andrew Jackson will be studied. Prerequisites: HI 221-222.
- HI 490 Jacksonian Democracy and the Coming of
the Civil War UG** *3 credits*
The election of Andrew Jackson and the "rise of the common man," the Whig-Democrat rivalry, the Texas question, Manifest Destiny, the rise of abolitionism, the events leading to the outbreak of the Civil War. Prerequisites: HI 221-222.
- HI 491 English History to 1603 UG** *3 credits*
From Roman times to the accession of the Stuart dynasty. Prerequisite: HI 112.
- HI 493 United States History 1865-1900 UG** *3 credits*
Prerequisites: HI 221-222.

HI 494 Modern German History UG**3 credits**

From the reign of Frederick the Great to the end of World War II. Prerequisite: HI 112.

HI 501 Seminar in Historical Methodology G**3 credits**

The basic methods of historical research and historical writing and the proper use of primary and secondary sources, bibliography; documentation, and annotation will be studied. Varieties, analysis and evaluation of source materials and construction of narrative will be considered. Prerequisite: Acceptance in a master's degree program at Bridgewater State College.

HI 502 Research G**credits to be arranged**

Original research undertaken by an individual in the field of history. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 9 credits for an M.A. and 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

HI 503 Directed Study G**credit to be arranged**

Directed study in the field of history. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 6 credits for an M.A. and 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.

HI 505 History of American Sciences G**3 credits**

The role of science, leading American scientists, and the formation of major scientific organizations and government scientific agencies in American history. Prerequisites: HI 221-222.

DEPARTMENT OF POLITICAL SCIENCE

Chairman: Professor Larson

Assistant Professors: Clifford, Yin

The Department of Political Science does not offer a program leading to the master's degree at this time. Political science courses may be taken, in partial fulfillment of the social sciences concentration for the degree of Master of Education in Secondary Education with a concentration in the social sciences or in partial fulfillment of the history concentration for the degree of Master of Education in Secondary Education with a concentration in history, if approved by the adviser.

Additional information regarding the degree may be found in this Catalog under the Department of Secondary Education.

Course Offerings

The following courses may be taken for graduate credit. Certain of these courses may be required as course prerequisites, and credit earned in them may not be counted toward meeting the minimum degree requirements of thirty graduate credits. In addition, the department may require course prerequisites in other departments. When a course is approved for degree credit by the faculty adviser, credits earned with acceptable grades may be used in partial fulfillment of degree requirements.

PO 271 Western Political Thought: Plato to the present UG 3 credits
Political ideas of major thinkers from ancient times to the modern era.

PO 272 American Government: The Federal System UG 3 credits
The constitutional authority, organization, activities, and political processes of the national government.

PO 273 U.S. and Massachusetts Constitution UG audit credit only
Structure of government and rights and responsibilities according to Federal and Commonwealth constitutions.

PO 371 Comparative Government UG 3 credits
Political behavior and governmental systems in Great Britain, West Germany, France, and the Soviet Union. Prerequisite: permission of the department.

PO 372 Legislative Process and Procedure UG 3 credits
The role of legislatures in modern American government, federal and state; the relationship of the voter and of apportionment to lawmaking; the two-party system and its impact on the lawmaking process; the committee system and seniority; and constitutional limitations on legislatures. Prerequisites: PO 272 and PO 377.

PO 374 Political Thought: Modern and Contemporary UG 3 credits
The ideas of major political thinkers in the era of the modern nation-state. Prerequisite: permission of the department.

PO 375 Political Parties UG 3 credits
The historical development of the American party system, and contemporary aspects of its functioning, at the national, state, and local level. Prerequisites: PO 272, PO 377, or permission of the department.

PO 377 American Government: State and Local Government UG 3 credits
Government and politics with emphasis on Massachusetts affairs. Prerequisite: PO 272, or permission of the department.

PO 379 Introduction to Public Administration UG 3 credits
The relationship of the administrative branch of government to other branches, in the making and implementation of public policy; theories of government organization for efficient administration; problems of budgeting, personnel, merit systems, types of agency organization, popular control over the bureaucracy, etc. Prerequisites: PO 272, PO 377, or permission of the department.

PO 471 International Relations UG**3 credits**

The patterns of inter-state relations and international organizations, the development of international law, and the factors motivating the behavior of nations. Prerequisites: PO 272, PO 371, or permission of the department.

PO 502 Research G**credit to be arranged**

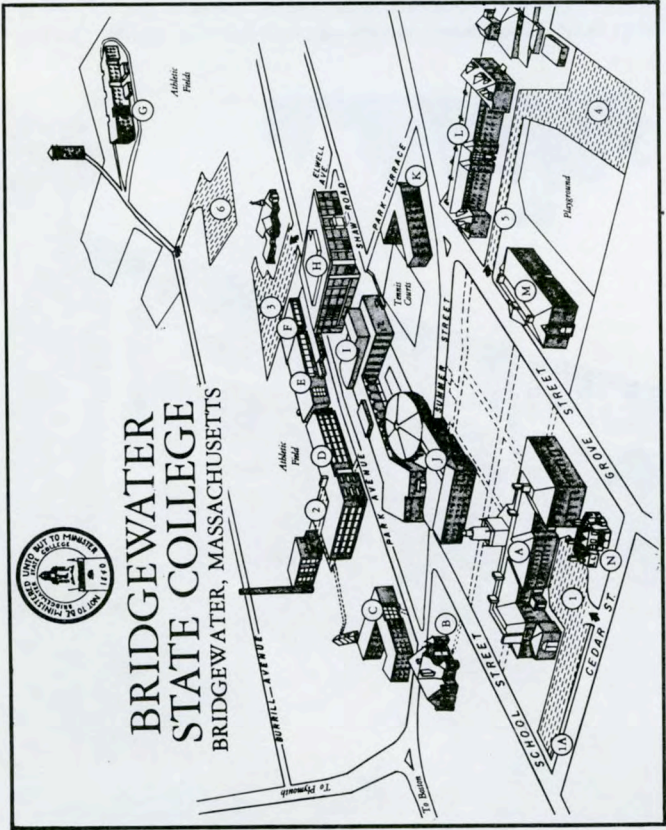
Original research undertaken by an individual in the field of political science. The student's investigations ordinarily culminate in a thesis. Variable credit, and repetitive up to a maximum total of 6 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Research** should obtain the form **Approval of Thesis Topic and Outline** at the Graduate School Office well in advance of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and approval of topic and outline by the student's adviser.

PO 503 Directed Study G**credit to be arranged**

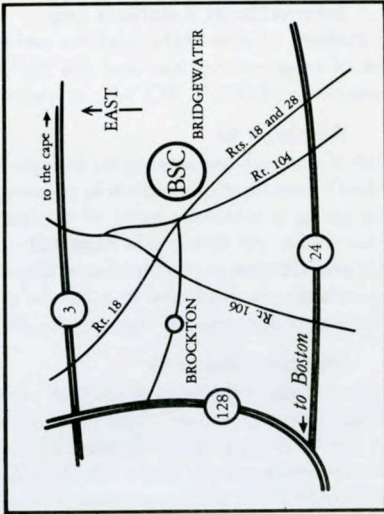
Directed study in the field of political science. Designed for individuals who desire to study selected topics in this field. Variable credit and repetitive up to a total of 4 credits for an M.Ed. Grades will be given. Students who wish to enroll in **Directed Study** should obtain the form **Request for Directed Study** at the Graduate School Office well in advance of registration. The completed form should be filed with the Division of Continuing Studies at the time of registration. Prerequisites: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser.



- PARKING AREAS**
- 1. BOYDEN HALL LOT
 - 1A. CEDAR ST. LOT
 - 2. SCIENCE BLDG. LOT
 - 3. GYMNASIUM LOT
 - 4. WOODWARD HALL LOT
 - 5. BURNELL SCHOOL LOT
 - 6. GREAT HILL LOT



- Key:**
- A. Boyden Hall
 - B. Humanities Building
 - C. Pope Hall
 - D. Conant Science Building
 - E. Kelly Gymnasium
 - F. Olympic Pool
 - G. Great Hill Residences
 - H. New Maxwell Library
 - I. Student Union Building
 - J. Tillinghast Hall
 - K. Scott Hall
 - L. Woodward Hall
 - M. M. Burnell School
 - N. Gates House



The College is located just east of Central Square in Bridgewater at the junction of routes 18, 28 and 104, approximately 30 miles south of Boston.

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DIRECTIONS FOR CORRESPONDENCE

The general address for all correspondence is: Bridgewater State College, Bridgewater, Massachusetts 02324. In order to avoid delay, correspondents are requested to note the following directions.

Requests for undergraduate catalogs should be addressed to the Registrar. Requests for catalogs of the Graduate School should be sent to the Office of the Graduate School.

Requests for brochures of the Division of Continuing Studies should be addressed to the Office of the Division of Continuing Studies.

Inquiries concerning requirements for concentrations and majors in a given department should be addressed to the chairman of that department.

Requests for transcripts should be sent as follows:

Students who hold a bachelor's and/or a master's degree from this college should write to the Registrar.

Students who have not completed their bachelor's degree should write to the Registrar for a transcript of courses taken through the Day Session, and to the Director of Continuing Studies for a transcript of courses taken through the Division of Continuing Studies.

Students who have earned their baccalaureate but who have not completed their master's degree at Bridgewater State College, should write to the Director of Continuing Studies for a transcript of courses taken in the Division of Continuing Studies and to the Registrar for transcripts of courses taken in the Day Session.

There is a charge of \$1.00 per transcript.

Inquiries concerning employment, health services, housing, loans, and scholarships, should be addressed to the Director of Student Personnel.

Inquiries concerning the Summer Session at Bridgewater State College should be addressed to the Director of Continuing Studies.

Inquiries concerning the Summer Session at Hyannis should be addressed to the Director of the Hyannis Summer Session.

Inquiries relative to the Graduate School should be addressed to the Dean of the Graduate School.

Inquiries concerning placement and student teaching should be addressed to the Director of Teacher Preparation and Placement.

Inquiries concerning Continuing Studies should be addressed to the Director of Continuing Studies.

Inquiries concerning financial aid should be addressed to the Financial Aid Officer.

Inquiries concerning alumni affairs should be addressed to the Executive Secretary of the Alumni Association.

Inquiries concerning academic employment should be addressed to the chairman of the appropriate department.

Inquiries concerning non-academic employment should be addressed to the Assistant to the President.

Inquiries concerning teacher certification should be addressed to the Director of Teacher Certification, Department of Education, 182 Tremont Street, Boston, Massachusetts, 02111.

Matters not covered above, and correspondence bearing upon the general interests of the College, should be addressed to the President.

THE GRADUATE SCHOOL

Bridgewater State College

Bridgewater, Massachusetts 02324